



# STIC Search Report

## EIC 3600

STIC Database Tracking Number: 175227

TO: Andrew Fischer  
Location: KNX 5C05  
Art Unit : 3627

Case Serial Number: 09/624154

From: Bode Akintola  
Location: EIC 3600  
KNX 4 B 59  
Phone: 571-272-3514

Olabode.akintola@uspto.gov

### Search Notes

Examiner Andrew,

Please find enclosed the results of your search request.

If you need a refocus, please feel free to contact me.

Thanks,

Bode

Considered cell  
JF 1/27/06

91  
**EIC 3600 COMMERCIAL DATABASE SEARCH REQUEST**

☒ **RUSH** - SPE signature required: Alexander Kalinowski

Staff Use Only

Access DB# 175227

**Business Methods Case:** 705/ 24, Cross 705/14,16,21,23,26,27

Write in 705 subclass(es) to search required files for 705 cases or cases cross referenced in 705.

**Serial Number:** 09/624,154

**Log Number:** \_\_\_\_\_

**Requester's Name:** Andrew Fischer **Examiner #:** 75586

**Date:** December 28, 2005

**Art Unit:** 3627 **Phone:** (571) 272-6779

**Mailbox Location & SPE:** Alexander Kalinowski, Knox 5D-49

**Bldg & Room #:** Knox 5C-05

**Results Format Preferred:** PAPER ☒

**Earliest Priority Filing Date:** July 24, 2000

**Attachments:** Bib Data Sheet, Abstract, Background of the Invention, Summary of the Invention, and claim 1

**Total Pages Including in this Search Request:** 10

**The claimed or apparent novelty of the invention is:**

A vending machine distribution company that prior to placing an order, totals (aggregates) the restock quantities before placing the order.

And the vending machine distribution company sending the restocking orders electronically.

**This search should focus on:**

(Also include keywords or synonyms)

Vending machine distribution company restocks vending machines. Before placing the order, the company totals the products that need to be purchased.

.....  
Special Instructions or Other Comments

If you have any questions or need help with keywords, please feel free to contact me.

COMPLETE INTERNET & PRIOR ART SEARCH REQUESTED

Please include a copy of this Sheet with the Search Results

**APPENDIX**

The claims pending in the application are as follows:

1. (Previously Presented) A method for supplying items to a plurality of dispensing units, the method comprising:
  - providing a plurality of dispensing units that each hold a plurality of each of multiple distinct items, wherein the units have a processor and a memory for storing a record of inventory levels of each distinct item;
  - periodically sending restocking information from the dispensing units over a network to a server computer, wherein the restocking information includes a restock quantity for each distinct item;
  - aggregating the restock quantities over the plurality of dispensing units for each of the multiple distinct items;
  - generating ordering information for the items to be restocked based on the aggregated restocking information; and
  - electronically sending the ordering information to one or more supplier computers to order items to be restocked into the dispensing units.
2. (Original) A method as in claim 1, further comprising polling the dispensing units over the network using the server computer to obtain the quantities of the items to be restocked.
3. (Original) A method as in claim 1, further comprising generating the ordering information using the server computer, and wherein the ordering information generating step further comprises determining supplier information for the items to be ordered.

# SYSTEMS AND METHODS FOR PURCHASING, INVOICING AND DISTRIBUTING ITEMS

## ABSTRACT OF THE DISCLOSURE

5 A method for supplying items to dispensing units that hold at least one type of  
item and a record of inventory levels comprises periodically sending restocking information  
from the dispensing units over a network to a server computer. Ordering information is  
generated for the items to be restocked based on the restocking information. The ordering  
information is electronically sent to one or more supplier computers to order items to be  
restocked into the dispensing units.

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## SYSTEMS AND METHODS FOR PURCHASING, INVOICING AND DISTRIBUTING ITEMS

### BACKGROUND OF THE INVENTION

5           This invention relates generally to the field of inventory systems, and in particular to inventory systems having point of use dispensers. More specifically, the invention relates to automated techniques for reordering items (or ordering new items) for the dispensers, filling the orders, confirming receipt of the orders and providing payment. The invention also relates to techniques for integrating the ordering and payment  
10 processes of such inventory systems with existing accounting systems to make the overall business process more versatile and efficient.

          The ability to effectively and efficiently supply items to end users is an important part of today's world economy. Common types of supply items that are of interest to the invention include manufacturing, repair and operational (MRO) supplies  
15 among others. As inventory levels of such items become low, a reordering process may be used to replenish the items. This process involves determining the types and quantities of items to reorder, as well as suppliers of the items. For example, a business establishment may wish to replenish its shelves with par levels of the same types of items. In some cases, however, a replacement item may be desired. Further, the establishment  
20 may wish to change suppliers due to poor service, excessive prices, or the like. Unfortunately, the ability to track inventory levels, as well as to identify suppliers having the ability to timely supply requested items at an acceptable price can be challenging.

          The reordering process may also involve a business's accounting department. For example, the accounting department may be responsible for taking a  
25 written reorder request and generating a written purchase order which is then sent to a supplier, e.g., by mail or facsimile. Since the accounting department generates and sends the purchase order, it is difficult to perform an independent review of the purchase order in order to confirm the order or change the order prior to sending. Further, it is difficult to identify other suppliers that may be able to ship the items sooner and/or at a lower  
30 price.

          Once the supplier receives a purchase order, the supplier attempts to fill the order. However, in some cases, the supplier may not have an adequate supply of the requested items. As a result, the missing items may be placed on back order, and the

available items shipped against the purchase order. When the end user receives a shipment, the end user must confirm receipt and notify the accounting department. This is often accomplished by having a dock worker signing a receipt from the supplier when the items are unloaded. This receipt is then manually sent to the accounting department for payment.

Such a process is challenging to the accounting department who must reconcile the items shipped with the items ordered. Further, the warehouse must update their inventory levels to make sure that the shelves have a par level of each of the items. This can be challenging when working from a signed receipt, especially when only a partial shipment is received.

Hence, this invention is related to inventory systems that utilize point of use dispensers that have the ability to maintain a record of current inventory levels. The invention is also related to techniques for the automated ordering of items, confirming the receipt of an order, and generating payment. The invention is further related to techniques for identifying alternative suppliers and for integrating the ordering process with existing accounting systems to provide the ability to review a purchase order and to approve and/or alter the purchase order before being sent to a supplier.

#### SUMMARY OF THE INVENTION

In one embodiment, a method is provided for supplying items to a plurality of dispensing units. The method utilizes a plurality of dispensing units that each hold a plurality of at least one type of item. Conveniently, these items may be held on a consignment basis. Further, the units each have a processor and a memory for storing a record of inventory levels of each item and transaction information. Periodically, restocking information that includes a restock quantity for each item is sent from the dispensing units over a network to a server computer. Ordering information for the items to be restocked is then generated based on the restocking information, and the ordering information is electronically sent to one or more supplier computers to order items to be restocked into the dispensing units.

Conveniently, the server computer may be used to poll the dispensing units over the network to obtain the quantities of the items to be restocked. Further, the server computer may be used to generate the ordering information by determining supplier information for the items to be ordered.

In one particular aspect, the ordering information is electronically sent from the server computer to an application computer having a hosted procurement application. In this way, the hosted procurement application may be accessed to view the ordering information. For example, a user may remotely access the hosted procurement application using any type of user computer that is connectable over a network, such as the Internet, to view the ordering information on a display screen. Conveniently, the user computer may include a web browser to view one or more pages on the display screen and to permit the ordering information to be approved, modified or canceled. As one specific example, the user may select other suppliers and/or manufacturers for the items to be restocked. This may be accomplished, for example, by electronically posting a list of suppliers as well as manufactures of items carried by the suppliers and their associated prices to permit manual selection of the suppliers and manufacturers. As another example, the hosted procurement application may be used to electronically post desired items and quantities to permit suppliers to provide electronic quotes for supplying the items. In some cases, the user may wish to order items that are not currently stocked in the dispensing units. Conveniently, the hosted procurement application may also be used to order items that are not on the aggregated demand list.

In another aspect, the ordering information may be sent from the hosted procurement application to an electronic requisition and purchasing system which is used to generate one or more electronic purchase order numbers and to electronically send the purchase order numbers back to the hosted procurement application. The hosted procurement application may then be used to electronically send the purchase order numbers and the supplier information to a business portal computer. In turn, the business portal computer may be used to electronically send the purchase order numbers to various supplier computers for order fulfillment.

In another particular aspect, the supplier may electronically send an advanced shipping notice to the business portal computer, which may then be forward on to the server computer via the hosted procurement application. The advanced shipping notice includes information on items to be shipped, their quantities and a date of shipment. For example, in some cases, some of the ordered items may not be in stock and will need to be backordered. The advanced shipping notice may contain this type of information. The server computer may then electronically send information contained in the advanced shipping notice to the dispensing units to apprise the dispensing units of the items and quantities that are to be shipped for restocking into the dispensing units. In

cases where the ordered items are not intended to be placed into a dispensing unit, information contained in the advanced shipping notice may be electronically sent from the hosted procurement application to the user computer.

Following shipment of the items listed in the advanced shipping notice, the items may be restocked into the dispensing units, and a record may be produced indicating the items that were actually received in the shipment and restocked into the dispensing units. Conveniently, the dispensing units may be restocked by simply pressing a restock button on the dispensing unit. Since the dispensing unit processor has a record of items to be restocked (from the advanced shipping notice), the shipped items may simply be placed into the dispensing unit. A corresponding item button is touched once for each item placed into the dispensing unit to record what items were actually shipped and once again to acknowledge that the quantity restocked is the same as the quantity contained in the record from the advance shipping notice. The dispensing units may then be used to reconcile the restocked items with the advanced shipping notice, and to electronically send a confirmation receipt to the server computer. The electronic receipt may then be forwarded from the server computer to the suppliers and to the electronic requisition and purchasing system. Using the electronic receipt, an electronic invoice may be generated by the supplier and may be electronically sent to the business portal computer and the hosted procurement application. Based on the electronic invoice, the electronic requisition and purchasing system may be used to generate payment for each supplier.

In another embodiment, the invention provides an exemplary system for supplying items to a plurality of dispensing units that each hold a plurality of at least one type of item. Optionally, these items may be held on a consignment basis. The dispensing units also have a processor and a memory for storing a record of inventory levels of each item. The system includes a server computer that is connectable to the dispensing units over a network to permit restocking information to be transmitted from the dispensing units to the server computer. The server computer is configured to generate ordering information for the items to be restocked based on the restocking information, and to electronically send the ordering information to one or more supplier computers to order items to be restocked into the dispensing units.

In one aspect, the server computer is configured to periodically poll the dispensing units over the network to obtain the quantities of the items to be restocked. The server computer may also be configured to associate suppliers with the items to be



ordered. The server computer may then be used to electronically send the ordering information to an application computer having a hosted procurement application.

Conveniently, a user computer having a display screen may be used to access the hosted procurement application to view the ordering information on the display  
5 screen. Further, the hosted procurement application may be used to produce one or more pages on the display screen of the user computer to permit the ordering information to be approved, modified or canceled.

The application computer may be used to send the approved ordering information to an electronic requisition and purchasing system that is configured to  
10 generate one or more electronic purchase order numbers and to electronically send the purchase order number to the application computer. The application computer may further be configured to electronically send the purchase order number and the supplier information to a business portal computer that is configured to electronically send the purchase order number to the supplier computer based on the supplier information.

In one aspect, the supplier computer may be configured to electronically  
15 send an advanced shipping notice to the business portal computer for transmittance to the server computer. The advanced shipping notice may include information on items to be shipped, their quantities and a date of shipment. In another aspect, the application computer may include code to electronically send information contained in the advanced  
20 shipping notice to the user computer for items that are not stocked in the dispensing units. In still another aspect, the server computer may include code to electronically send information contained in the advanced shipping notice to the dispensing units to apprise the dispensing units of the items and quantities to be shipped for restocking into the dispensing units.

In one aspect of the system, the dispensing units may be configured to  
25 reconcile any restocked items with the advanced shipping notice and to electronically send a confirmation receipt to the server computer. The server computer may include code to electronically send the receipt to the supplier computers and to the electronic requisition and purchasing system. With such a configuration, the supplier computers  
30 may include code to generate an electronic invoice based on the receipt, and to electronically send the invoice to the business portal computer and the application computer. The application computer may then be configured to electronically transmit the electronic invoice to the electronic requisition and purchasing system for payment generation.

In yet another embodiment, the invention provides a hosted procurement application that comprises a computer readable medium having ordering information on items and quantities to be stocked into a plurality of dispensing units. The ordering information includes suppliers of the items. The hosted procurement application further includes code to permit access to the ordering information over a network such that the ordering information may be approved, modified, or canceled over the network. Code is also provided to transmit the ordering information to an electronic accounting system to generate an electronic purchase order.

#### BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a perspective view of one embodiment of a dispensing unit that may be used in tracking inventory levels according to the invention.

Fig. 2 is a perspective view of an alternative dispensing unit that may be used in tracking inventory levels.

Fig. 3 schematically illustrates a process for polling dispensing units using a server computer and generating a restock request using an administrative computer according to the invention.

Fig. 3A is a side view of a shelf from one of the dispensing units of Fig. 3.

Fig. 4 schematically illustrates a process for accessing a hosted procurement application of the administrative computer of Fig. 3 to approve, modify or cancel an order.

Fig. 5 schematically illustrates an electronic requisition and purchasing system to provide purchase order information for the hosted procurement application of Fig. 4.

Fig. 6 schematically illustrates an e-business portal that is connectable to multiple market sites and that is configured to receive purchase orders from the hosted procurement application of Fig. 5.

Fig. 7 schematically illustrates the transmission of purchase orders from the e-business portal of Fig. 6 to multiple supplier computers.

Fig. 8 schematically illustrates the sending of an advanced shipping notice from one of the supplier computers of Fig. 7.

Fig. 9 schematically illustrates the sending of the advanced shipping notice to the dispensing units and the end user computer.

Set	Items	Description
S1	19668	INVENTORY OR INVENTORIES
S2	528121	RESTOCK? OR RE()STOCK? OR REPLENISH? OR REPLAC?
S3	1023868	ONLINE OR ON()LINE OR INTERNET OR INTRANET? OR NETWORK? ? - OR SERVER? ? OR WEB? OR PORTAL? OR WWW OR CYBER? OR ELECTRONI- C? OR AUTOMAT?
S4	7186	(DISPENSING OR VENDING) () (MACHINE? OR UNIT? ?)
S5	767322	CUMULATIVE OR AGGREGAT? OR TOTAL?
S6	1237296	VALUE? ? OR QUANTITY OR QUANTITIES OR AMOUNT OR ITEM? ?
S7	1124530	ORDER? ? OR ORDERING
S8	123314	S5 (5N) S6
S9	2987	S8 (10N) S7
S10	10	S9 (2S) S4
S11	202	S9 (2S) S2
S12	205	S4 (S) S2 (S) S3
S13	43	S12 (S) S7
S14	10	S13 (S) S1
S15	15	(S10 OR S13 OR S14) AND IC=G06F-017?

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File 348:EUROPEAN PATENTS 1978-2005/Dec W03  
(c) 2005 European Patent Office

File 349:PCT FULLTEXT 1979-2005/UB=20051222,UT=20051215  
(c) 2005 WIPO/Univentio

*considered q7 1/22/06*

15/3,K/1 (Item 1 from file: 348)  
DIALOG(R) File 348:EUROPEAN PATENTS  
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01796015

Mobile electronic commerce system  
Mobiles elektronisches Handelssystem  
Systeme de commerce electronique mobile

PATENT ASSIGNEE:

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PATENT (CC, No, Kind, Date): EP 1467300 A1 041013 (Basic)

APPLICATION (CC, No, Date): EP 2004015278 980813;

PRIORITY (CC, No, Date): JP 97230564 970813

DESIGNATED STATES: DE; FR; GB

RELATED PARENT NUMBER(S) - PN (AN):

EP 950968 (EP 98937807)

INTERNATIONAL PATENT CLASS: G06F-017/60 ; H04Q-007/32; G07F-007/08

ABSTRACT WORD COUNT: 150

NOTE:

Figure number on first page: 1

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200442	17631
SPEC A	(English)	200442	160348
Total word count - document A			177979
Total word count - document B			0
Total word count - documents A + B			177979

INTERNATIONAL PATENT CLASS: G06F-017/60 ...

...SPECIFICATION the electronic payment card at the merchant terminal 102 or 103 or at the automatic vending machine in accordance with a contract entered into with a merchant. The payment card settlement process...

...card for a settlement process with the merchant terminal 102 or 103, or the automatic vending machine 104. The payment card reference process is a process whereby the merchant terminal 102 or 103 or the automatic vending machine 104 asks the service providing system whether the electronic payment card that is employed is...

...that is to be processed by the merchant terminal 102 or 103 or the automatic vending machine 104.  
The payment card setup process is not performed according to a special processing sequence...

...providing system updates the data in the merchant terminal 102 or 103 and the automatic vending machine 104.

When a time that has been set in advance is reached, the merchant terminal 102 or 103, or the automatic vending machine 104 automatically initiates the data updating process, and transmits, to the service providing system, a...

...The service providing system transmits, to the merchant terminal 102 or 103 or the automatic **vending machine** 104, a data update response 5703, which is a message dispatched in response to the...

...receiving the data update response 5703, the merchant terminal 102 or 103 or the automatic **vending machine** 104 generates and transmits, to the service providing system, upload data 5704, which is a...

...the service providing system transmits, to the merchant terminal 102 or 103 or the automatic **vending machine** 104, an update data message 5705 that includes the update data that has been generated. The merchant terminal 102 or 103 or the automatic **vending machine** 104 develops the update data that is included in the received update data message 5705...

...electronic payment card that is processed by the merchant 102 or 103 or the automatic **vending machine** 104 is also updated.  
In Fig. 68 is shown the payment card settlement processing performed...

...shown the payment settlement processing performed by the mobile user terminal 100 and the automatic **vending machine** 104.  
First, the user selects "purchase" from the operating menu that is displayed on the touch panel LCD of the automatic **vending machine** (purchase start operation 6900). The automatic **vending machine** then displays, on the touch panel LCD, a message permitting the user to select a...

...depresses the product selection switches 704 for desired products (product selection operation 6902), the automatic **vending machine** counts the number of selected products, calculates the total charge, and displays, on the touch...

...the selection switch 704 for other desired products (product selection operation 6902), similarly, the automatic **vending machine** counts the number of selected products, calculates the total charge, and displays, on the touch...

...When the user presses the payment operation start button (payment start operation 6904), the automatic **vending machine** displays, on the LCD, a message permitting the user to start the payment operation using...

...while directing the infrared communication port 300 toward the infrared communication port of the automatic **vending machine** (payment operation 6906), the user depresses the execution switch 311. The mobile user terminal generates...

...card type or the remaining total amount) and that is a message to the automatic **vending machine** (merchant) offering to pay the amount represented by the price. The payment offer 6907 is then transmitted to the automatic **vending machine** via infrared communication.  
Upon receiving the payment offer 6907, the automatic **vending machine** examines the type of payment card and the remaining amount, and via infrared communication, transmits...

...than the amount of the payment entered by the user. The user subtracts the charge amount from the total remaining amount held by the electronic payment card, and generates a micro-check 6909, which is a...

...given as the face value. The micro-check 6909 is thereafter transmitted to the automatic **vending machine** via infrared communication. The

automatic vending machine examines the contents of the received micro-check 6909, and generates a receipt 6910, which...

...corresponding to the message for the micro-check 6909 that has been paid. The automatic vending machine transmits the receipt 6910 to the mobile user terminal via infrared communication and discharges products ...

15/3,K/2 (Item 2 from file: 348)  
DIALOG(R) File 348:EUROPEAN PATENTS  
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01030324

**MOBILE ELECTRONIC COMMERCE SYSTEM**  
**MOBILES ELEKTRONISCHES HANDELSSYSTEM**  
**SYSTEME DE COMMERCE ELECTRONIQUE MOBILE**

**PATENT ASSIGNEE:**

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**INVENTOR:**

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**LEGAL REPRESENTATIVE:**

Grunecker, Kinkeldey, Stockmair & Schwanhausser Anwaltssozietat (100721), Maximilianstrasse 58, 80538 Munchen, (DE)

PATENT (CC, No, Kind, Date): EP 950968 A1 991020 (Basic)  
WO 9909502 990225

APPLICATION (CC, No, Date): EP 98937807 980813; WO 98JP3608 980813

PRIORITY (CC, No, Date): JP 97230564 970813

DESIGNATED STATES: DE; FR; GB

RELATED DIVISIONAL NUMBER(S) - PN (AN):  
(EP 2004015278)

INTERNATIONAL PATENT CLASS: G06F-017/60

ABSTRACT WORD COUNT: 150

**NOTE:**

Figure number on first page: 1

LANGUAGE (Publication,Procedural,Application): English; English; Japanese  
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	9942	17239
SPEC A	(English)	9942	160346
Total word count - document A			177585
Total word count - document B			0
Total word count - documents A + B			177585

INTERNATIONAL PATENT CLASS: G06F-017/60

...SPECIFICATION the electronic payment card at the merchant terminal 102 or 103 or at the automatic vending machine in accordance with a contract entered into with a merchant. The payment card settlement process...

...card for a settlement process with the merchant terminal 102 or 103, or the automatic vending machine 104. The payment card reference process is a process whereby the merchant terminal 102 or 103 or the automatic vending machine 104 asks the service providing system whether the electronic payment card that is employed is...that is to be processed by the merchant terminal 102 or 103 or the automatic vending machine

104.

The payment card setup process is not performed according to a special processing sequence...

...providing system updates the data in the merchant terminal 102 or 103 and the automatic **vending machine** 104.

When a time that has been set in advance is reached, the merchant terminal 102 or 103, or the automatic **vending machine** 104 automatically initiates the data updating process, and transmits, to the service providing system, a...

...The service providing system transmits, to the merchant terminal 102 or 103 or the automatic **vending machine** 104, a data update response 5703, which is a message dispatched in response to the...

...receiving the data update response 5703, the merchant terminal 102 or 103 or the automatic **vending machine** 104 generates and transmits, to the service providing system, upload data 5704, which is a...

...the service providing system transmits, to the merchant terminal 102 or 103 or the automatic **vending machine** 104, an update data message 5705 that includes the update data that has been generated. The merchant terminal 102 or 103 or the automatic **vending machine** 104 develops the update data that is included in the received update data message 5705...

...electronic payment card that is processed by the merchant 102 or 103 or the automatic **vending machine** 104 is also updated.

In Fig. 68 is shown the payment card settlement processing performed... shown the payment settlement processing performed by the mobile user terminal 100 and the automatic **vending machine** 104.

First, the user selects "purchase" from the operating menu that is displayed on the touch panel LCD of the automatic **vending machine** (purchase start operation 6900). The automatic **vending machine** then displays, on the touch panel LCD, a message permitting the user to select a...

...depresses the product selection switches 704 for desired products (product selection operation 6902), the automatic **vending machine** counts the number of selected products, calculates the total charge, and displays, on the touch...

...the selection switch 704 for other desired products (product selection operation 6902), similarly, the automatic **vending machine** counts the number of selected products, calculates the total charge, and displays, on the touch...

...When the user presses the payment operation start button (payment start operation 6904), the automatic **vending machine** displays, on the LCD, a message permitting the user to start the payment operation using...

...while directing the infrared communication port 300 toward the infrared communication port of the automatic **vending machine** (payment operation 6906), the user depresses the execution switch 311. The mobile user terminal generates...

...card type or the remaining total amount) and that is a message to the automatic **vending machine** (merchant) offering to pay the amount represented by the price. The payment offer 6907 is then transmitted to the automatic **vending machine** via infrared communication.

Upon receiving the payment offer 6907, the automatic **vending machine** examines the type of payment card and the remaining amount, and via infrared communication, transmits...

...message for the payment offer 6907. The payment offer response 6908 includes information expressing the **amount** charged (the **total value** of the products).

Upon receiving the payment offer response 6908, the mobile user terminal confirms...

...given as the face value. The micro-check 6909 is thereafter transmitted to the automatic **vending machine** via infrared communication. The automatic **vending machine** examines the contents of the received micro-check 6909, and generates a receipt 6910, which...

...corresponding to the message for the micro-check 6909 that has been paid. The automatic **vending machine** transmits the receipt 6910 to the mobile user terminal via infrared communication and discharges products  
...

15/3,K/3 (Item 3 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

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00772367

**A SYSTEM FOR SALE OF CONSUMER GOODS**

**KONSUMENTENGUTERVERKAUFSSYSTEM**

**SYSTEME DE VENTE DE BIENS DE CONSOMMATION**

PATENT ASSIGNEE:

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INVENTOR:

PLANKE, Tore, Stranden 73, N-0250 Oslo, (NO)

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Delmar, John-Ake et al (22642), Ehrner & Delmar Patentbyrå AB P.O. Box 10316, 100 55 Stockholm, (SE)

PATENT (CC, No, Kind, Date): EP 786120 A1 970730 (Basic)

EP 786120 B1 020403

WO 9612254 960425

APPLICATION (CC, No, Date): EP 95935621 950914; WO 95N0166 950914

PRIORITY (CC, No, Date): NO 943849 941012

DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE

INTERNATIONAL PATENT CLASS: G07F-007/08; **G06F-017/60** ; G06F-153:00

NOTE:

No A-document published by EPO

LANGUAGE (Publication,Procedural,Application): English; English; Norwegian

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	200214	615
CLAIMS B	(German)	200214	542
CLAIMS B	(French)	200214	710
SPEC B	(English)	200214	3881
Total word count - document A			0
Total word count - document B			5748
Total word count - documents A + B			5748

...INTERNATIONAL PATENT CLASS: **G06F-017/60**

...SPECIFICATION specific article of merchandise. This symbol of an article may be an optically, magnetically or **electronically** readable card containing data both in the form of a number of an article of...



...bar code, a numerical code, or a magnetic region or in the form of an electronically readable area on the card. The customer brings the card or possibly a plurality of...

...via a connection 6 to a converting means 7 in the control unit 3 in order to convert the merchandise article number which is transferred to the value of the article...

...signal for the card to a comparator and controller unit 10 included in a merchandise dispensing machine 11, said transmission occurring upon or subsequent to the registration of said amount in the...

15/3,K/4 (Item 1 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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01236254 \*\*Image available\*\*  
SYSTEM AND SOFTWARE OF ENHANCED PHARMACEUTICAL OPERATIONS IN LONG-TERM CARE FACILITIES AND RELATED METHODS  
SYSTEME ET LOGICIEL D'OPERATIONS PHARMACEUTIQUES AMELIOREES DANS DES ETABLISSEMENTS DE SOINS A LONG TERME ET PROCEDES ASSOCIES

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AE AG AL AM AT AU AZ BA BB BG BR BW BY BZ CA CH CN CO CR CU CZ DE DK DM  
DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC  
LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ OM PG PH PL PT RO  
RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW  
(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LU MC NL PL PT  
RO SE SI SK TR  
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Claims

Claim

pharmaceutical storage and dispensing machines or carts 30 (FIG. 2)  
to control inventory in each of the plurality of pharmaceutical storage

and **electronic dispensing machines** or carts 30 and to **order** delivery of pharmaceuticals to **restock** the dispensing carts 30 or for individually tailored prescription delivery by the vehicles V (FIG...

...carts 30. The longterm care facility pharmacy management software 20, for example, also can include **automated inventory replenishment** of the dispensing carts 30, dispensing cart dispensing control, claim processing, prescribed drug conflict analysis...

...a patient prescription receiver 51 which receives a digital image of a patient medication prescription **order** from a pharmaceutical prescription document processor 14 associated with a remote medication dispensing apparatus, such...

...digital image of the patient medication prescription and to queue the digital image for prescription **order** processing. A patient prescription **order** transferor 53, preferably stored in memory of the pharmaceutical storage and dispensing device 30 transmits over the communication **network** 18 the digitized image of the patient medication prescription **order** received from an associated pharmaceutical prescription processor 14 to the pharmacy group management **server** 15 or remote pharmacy group **server** 40, in response to a release initiated by either a pharmacy staff member or a facility staff member. This provides the pharmacy group management **server** 15 or remote pharmacy group **server** 40 with patient medication requirements which can be stored in database 22. Correspondingly, a patient...

...portions can be stored in the memory 21 (database 22) of the pharmacy group management **server** 15. [00461 A queue 57 receives the digital image and holds the digital image for prescription **order** requirements entry and release verification by a remote pharmacy pharmacist. A drug conflict analyzer 59, responsive to the prescription **order** requirements and data contained within the patient record, can analyze the prescription **order** requirements against the patient medication profile, the patient  
16  
allergy profile, the patient diagnosis profile...

...exists. If no conflict is found, a dispensing initiator 61 positioned to receive the medication **inventory** for each of the pharmaceutical storage and **electronic** dispensing carts 30 and responsive to the release verification performed by the remote pharmacy pharmacist, can transmit individual facility patient pharmaceutical dispensing instructions to the respective pharmaceutical storage and **electronic** dispensing cart 30 over the communication **network** 18 to thereby initiate patient medication dispensing. [00471 A patient billing tracker 63, responsive to patient medication dispensing from the respective pharmaceutical storage and **electronic** dispensing cart 30, can provide separate billing records for each of a plurality of patients...

...by reimbursement provider, and submit the medication claims to each respective reimbursement provider,  
[00481 An **inventory** tracker 67 can maintain the medication **inventory** for each of the pharmaceutical storage and **electronic** dispensing carts 30. An **inventory replenisher** 69 is positioned to receive the medication **inventory** from the **inventory** tracker 67, and responsive to the medication **inventory** decreasing below a minimum threshold level, to notify pharmacy personnel associated with the remote pharmaceutical dispensing and storage facility 40 of a **replenishment** requirement for at least one of the pharmaceutical storage and **electronic** dispensing

carts 30. [00491 A medication dispensing apparatus administrator 71, responsive to an input from...

...control functions available to facility medical personnel from the terminal of the pharmaceutical storage and **electronic** dispensing cart 30, over the communications **network**, to thereby remotely provide training to the facility medical personnel. A medication dispensing apparatus imager...

...a video image of facility medical personnel and functional components of the pharmaceutical storage and **electronic** dispensing cart 30 over the communications

17

**network** 18, to also remotely provide training to the facility medical personnel and for remote, real-time, troubleshooting the pharmaceutical storage and **electronic** dispensing cart 30. [00501 It is important to note that although embodiments of the present...

...set of instructions that, when executed by a computer, such as, for example, group management **server** 15, remote pharmacy group **server** 40, or a combination of the both, cause the computer to establish remote communications between...

...12. The instructions include those for receiving a digital image of an actual pharmaceutical prescription **order** containing patient prescription requirements, queuing the pharmaceutical prescription **order** for examination by a remote pharmacy pharmacist associated with the remote pharmacy 41, analyzing...

...a medication dispensing time, and those for maintaining a record of medication dispensed and an **inventory** of medication remaining in each cartridge of each pharmaceutical storage and dispensing apparatus 30. The ...

...can also include those for transmitting the patient prescription requirements to the pharmaceutical storage and **electronic** dispensing cart

30 and dispensing medication in response to the patient prescription requirements for each...procedures within a plurality of long-term care facilities, installing a pharmaceutical storage and **electronic dispensing machine** or cart 30 at each of the plurality of long-term care facilities 12 to...

...the long-term care facility pharmacy group management server (15) to process a pharmaceutical prescription **order** from the long-term care facility (12) to be delivered to the long-term...

15/3,K/5 (Item 2 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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01228778 \*\*Image available\*\*

SYSTEM AND METHOD FOR VERIFYING AND SEARCHING DOCUMENTS

SYSTEME ET PROCEDURE DE VERIFICATION ET DE RECHERCHE DE DOCUMENTS

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DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC  
LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NA NI NO NZ OM PG PH PL PT RO  
RU SC SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW  
(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PL PT RO  
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Claims

Claim

... with FIGS. 1a-1 1. They are communicatively linked via a host 1536 to  
the **network** 1512 such as described in connection with FIG. 1 1. The  
first document processing device...

...to a ticket tracking system 1516 which, according to one embodiment, is  
coupled to the **network** 1512. In other embodiments, the ticket numbers  
are stored in a floppy disk which is...

...1514 for reconciliation. [1661 The gaming machines 1502, 1504, 1506 are  
communicatively coupled to the **network** 1512. In one embodiment, the  
information encoded on the batch identification cards placed in the...  
bills and substitute currency media which generally includes a gaming  
machine 1602 coupled to a **network** 1604. The **network** 1604 is coupled  
to an accounting system 1606 and a tickettracking system 1608. The casino  
...

...currency detectors 1618 and one or more barcode readers 1620, though not  
necessarily in that **order**. The currency detector 1618 is adapted to  
detect characteristic information associated with the authenticity and...

...data 1630 is stored in a file on a floppy disk, a hard drive, a **network**  
drive, or any other suitable storage medium. [1701 After the documents  
are processed, they are...

...more output receptacles at step 1628. The processed document data 1630  
is provided to the **network** 1604. In an alternate embodiment, the  
processed document data 1630 may be provided to the...

...ticket numbers and values, the processed document data 1630 can be provided either via the **network** 1604 or directly to the accounting system 1606 for reconciliation. [1711 The gaming machine 1602 is also coupled to the **network** 1604. The gaming machine 1602 produces preprocessed document data 1632 during operation. The preprocessed document...

...redeemed at the gaming machine 1602. The preprocessed document data 1632 is provided via the **network** 1604 to the accounting system 1606 or the ticket tracking system 1608. After the processed...

...cartridge is placed into the feeding mechanism and its unique number is entered manually or **automatically** into the machine. During processing, when a header card is present, the machine does not...

...card for the batch 1 is gun scanned. The barcode card for batch 1 is **replaced**, at step 1912, with a separator card. At step 1914, batch 1 is loaded into...

15/3,K/6 (Item 3 from file: 349)  
 DIALOG(R)File 349:PCT FULLTEXT  
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01191088 \*\*Image available\*\*

**A CONTROL SYSTEM FOR RETRIEVING HTML DATA**  
**SYSTEME D'ACCES, D'INFORMATION ET DE COMMANDE AMELIORES POUR EQUIPEMENTS ET INSTALLATIONS**

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 DZ EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC  
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 (EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PL PT RO  
 SE SI SK TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

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Fulltext Availability:

Claims

Claim

... for controlling physical devices as specified in Claim 28. Human

readable text languages used in **web** pages, such as HTNE, are not only well known but also easy to learn and use. Their exploitation does not require special information...

...and experience. In the invention text source code is returned from a computer in a **web** page in response to a hypertext transfer protocol (http) request. The source code contains data...  
...other character. The invention eliminates the need to use bespoke programming systems across a computer **network**. In the invention the control data is returned as human readable text in a **web** page. In the invention it is possible to locate and act upon control information...

...from data normally presented on-screen. The relevant information is presented -with some structure in **order** that a microcontroller program can easily identify and process control instructions.

SUBSTITUTE SHEET (RULE 26)

The invention will allow Graphical Objects to be presented on-screen as a **web** -page allowing further simplification and control. For instance, a **web** -page displaying an icon of a closed door when clicked will open a door and the...

...way leading to greater understanding and development, similar to the way in which HTNE for **web** programming developed. For example, an **electronic** training board -with lights switches and displays can be connected to a home **network**. A home computer can then be used to communicate using the control system of the...

...board and observe the changes both on the board and the home computer using an **Internet** browser. In time this would help to de-mystify control technology. It might also lead...

...sectors. The invention can be recognised by any, micro-controller that is capable of supporting **network** (UFP) port, with Transmission Control Protocol/ **Internet** protocol (TCP/IP) connectivity. The invention can be used by the micro-controller for initialisation and configuration, thus enabling a general micro-controller to determine its operation from an **Internet server**. The invention allows control systems to be driven from information held in tables from applications...

...SHEET (RULE 26)

The invention provides the basis for the development of a ubiquitous 'black box' **network** communication device that simply plugs into a device on one side and the **Internet** on the other and instantly enables information exchange between the two. The invention provides the ability of 'network enabling' almost any device. The invention does not concern itself -with the applications that are used to generate the human readable text in **web** pages; hence it provides an open platform for practitioners to develop using whatever means they...

...structure the data. The invention provides a structured adaptation of human readable text data in **web** pages that could enable practitioners of control technology to teach a single methodology for device...

...a security door; and

Figure 3 is a diagram illustrating the programs that interoperate in **order** to establish communications between the micro-controller, the device connected to the micro-controller and a networked computer ( **server** ). In Figure 1 it can be seen that when a person requires entry through a...

...SHEET (RULE 26)  
 is contained within the card data is sent by means of a **network** request 4 to the **server** 5. A **server** program 6 inspects the database 7 for matching information. If the user identity is valid the...

...is returned with table data markers 8 to the micro-controller program 3 via the **server** 5. 'Me door I could be any control requirement and examples in an office environment...

...art the micro-controller program 3 is vendor specific but in the present invention it **replaced** by a standard program that looks for patterns in data and strips out relevant information...

...control requirement. This method is simple and uses open standards. In the prior art a **network** request code 4 is vendor specific but in the present example it is **replaced** by an **Internet** request, i.e. <http://wwwsome-site.corrL Tl-@s> **replaces** the plethora of complex **network** request methodologies currently available. In the prior art the **server** 5 uses software that is vendor specific but in the present example is **replaced** by an open database driven **server** architecture. This enables **servers** to be configured and used for control requirements by a far larger community of people...

...RULE 26)  
 information in a form that assumes that the data is destined for a **web** -browser. In fact, a micro- controller program will receive the data. The micro-controller program must therefore ignore information designed for **web** -browser readability and instead find the control information relevant to the request. In **order** to simplify the micro-controller program it is recommended that the computer program returns structured...

...serve requests for information from micro-controller programs. The microcontroller could control devices without requiring **network** connection. However, this would limit its function. In **order** to adapt to multiple requirements **network** connection is required. The fact that, in this application, the **network** connection is supported by **Internet** standards provides additional versatility. Figure 2 is a flow diagram that illustrates the operation of...

...security door. Many other devices could be controlled such as; photocopiers, printers, car-park barriers, **vending machines**, cash tills. The control of such devices using a common communications standard obviously benefits companies...

...a solenoid. The program provides the basic knowledge required to develop an understanding of the **Internet** request and reply and indicates how the reply could be used to perform a control...

...creates a variable 'UserNAME' into which the data can be stored. The program searches the **web** -page 4-ME) until a table data marker is found. The data between this marker...

...1] ld'  
 buffer[c-21 == It, && bufferfc- 3] I<)  
 )While not end of buffer data  
 ( **web** page)  
 i=0;  
 Search each line for -qd >  
 marker in MML page wMe (c <len...

...shown). This presents casual and dedicated developers alike with the

relatively simple task of creating a **web** -page that appears to be **automatically read** by a micro-controller that is used to designate some control requirement like a security...

15/3,K/7 (Item 4 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00927464 \*\*Image available\*\*  
**METHOD AND APPARATUS FOR CONDUCTING LIVE, POINT-OF-SALE, ELECTRONIC MONITORING AND TRANSACTION SERVICES**  
**PROCEDE ET APPAREIL DE REALISATION DE SERVICES DE TRANSACTION ET DE SURVEILLANCE ELECTRONIQUES D'UN POINT DE VENTE, EN DIRECT**

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AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ  
EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR  
LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI  
SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

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Fulltext Availability:

Detailed Description

Detailed Description

... the remote computer (which actually obtains the data from the vending machine), or via another **server** computer upon which the data has passed. Thus, route personnel may access the information prior to visiting each machine in **order** to determine **inventory** as well as any problems or errors that may have been generated. For example, the **web** page lists all active machines for a given company or route. For each machine listed...



...date and time for the last batch process, the last DEX Reset, the last product **restocking** visit, and the last Maintenance visit, etc., are displayed.

Each date time is color-coded...

15/3,K/8 (Item 5 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00874837 \*\*Image available\*\*  
**SYSTEMS AND METHODS FOR PURCHASING, INVOICING AND DISTRIBUTING ITEMS**  
**SYSTEMES ET PROCEDES PERMETTANT D'ACQUERIR, DE FACTURER ET DE DISTRIBUER**  
**DES ARTICLES**

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LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL  
TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

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Detailed Description

Claims

English Abstract

A system (52, 60, 62) and method for supplying items to **dispensing units or vending machines** (10). The units record **inventory** levels and periodically send **restocking** information over a computer **network**. The system receives this **restocking** information and **electronically orders** the **inventory** from various suppliers.

Detailed Description

... Further, the units each have a processor and a memory for storing a record of **inventory** levels of each item and transaction information. Periodically, restocking information that includes a restock quantity for each item is sent from the **dispensing units** over a **network** to a

server computer. Ordering information for the items to be restocked is then generated based on the restocking information, and the ordering information is electronically sent to one or more supplier computers to order items to be restocked into the dispensing units

Conveniently, the server computer may be used to poll the dispensing units over the network to obtain the quantities of the items to be restocked. Further, the server

2

computer may be used to generate the ordering information by determining supplier information for the items to be ordered.

In one particular aspect in the dispensing units. Conveniently, the hosted procurement application may also be used to order items that are not on the aggregated demand list.

In another aspect, the ordering information may be sent from the hosted procurement application to an electronic requisition and purchasing...

...server computer may then electronically send information contained in the advanced shipping notice to the dispensing units to apprise the dispensing units of the items and quantities that are to be shipped for restocking into the dispensing units. In cases where the ordered items are not intended to be placed into a dispensing unit, information contained in the advanced shipping notice may be electronically sent from the hosted procurement...

...a network to permit restocking information to be transmitted from the dispensing units to the server computer. The server computer is configured to generate ordering information for the items to be restocked based on the restocking information, and to electronically send the

4

ordering information to one or more supplier computers to order items to be restocked into the dispensing units.

In one aspect, the server computer is configured to periodically poll the dispensing units over...of items to be restocked into the dispensing units, i.e., to aggregate the demand. Server computer 60 further aggregates the demand by suppliers for the items to be restocked. In this way, ordering information is generated that includes items to be reordered, their quantities, and suppliers of the items. The ordering information is then transmitted over the network to an application computer 62 that operates a hosted procurement application. The hosted procurement application may be operated at a customer site or may be hosted over the Internet.

As shown in Fig. 4, a user computer 64 may be used to access the...

...by use of supplier computers 74, a supplier is able to electronically receive a purchase order that was produced using an automated system that aggregates demand as items are consumed.

After receiving the purchase order, the supplier determines how the order is to be filled. This information is placed into...

...code to send the advanced shipping notice of items to be shipped and restocked to dispensing units 50 as shown in Fig. 9. In this way, dispensing units 50 are apprised of the items that are being shipped

from the suppliers.

Further, for items that are not intended to be stocked in **dispensing units** 50, application computer 62 sends the advanced shipping notice to user computer 64 via the...

Claim

... item, wherein the units have a processor and a memory for storing a record of

**inventory** levels of each item;

periodically sending restocking information from the dispensing units over a **network** to a **server** computer, wherein the **restocking** information includes a **restock** quantity for each item;

generating **ordering** information for the items to be **restocked** based on the

**restocking** information;

1 **electronically** sending the **ordering** information to one or more supplier computers to **order** items to be **restocked** into the **dispensing units** .

2 A method as in claim 1, further comprising polling the dispensing units over the...

...and purchasing system.

16 A method to facilitate supplying of items into a plurality of **dispensing**

**units** , the method comprising:

receiving at a **server** computer **restocking** information from a plurality of **dispensing units** , wherein the **restocking** information includes a **restock** quantity for items to be **restocked** into the **dispensing units** ;

generating **ordering** information for the items to be **restocked** using the **server**

computer based on the **restocking** information; and

**electronically** sending the **ordering** information from the **server** computer to permit **restock** items to be ordered.

1 0

17 A method as in claim 16, further comprising...the server computer.

23 A method to facilitate supplying of items into a plurality of **dispensing**

**units** , the method comprising:

receiving at a **server** computer **restocking** information from a plurality of **dispensing units** , wherein the **restocking** information includes a **restock** quantity for items to be **restocked** into the **dispensing units** ;

generating **ordering** information for the items to be **restocked** using the **server**

computer based on the **restocking** information;

**electronically** sending the **ordering** information from the **server** computer to an application computer which operates a hosted procurement application to permit the **ordering** information to be approved, canceled or modified.

17

24 A method as in claim 23...

...in claim 28, further comprising receiving at the server computer a confirmation receipt from the **dispensing units** of items contained in the advanced shipping notice that were restocked into the **dispensing units** .

30 A method as in claim 29, further comprising electronically sending the receipt from the...

...purchasing system for payment.

31 A method for supplying consigned items to a plurality of **dispensing units** , the method comprising:

1 8

providing a plurality of **dispensing units** that each hold a plurality of at least one type of item on consignment from...

...supplier, wherein the units have a processor and a memory for storing a record of **inventory** levels of each item; periodically sending restocking information from the **dispensing units** over a **network** to a **server** computer, wherein the **restocking** information includes a **restock** quantity for each item;

generating **ordering** information for the items to be **restocked** based on the

1 0 **restocking** information;

1 1 **electronically** sending the **ordering** information to one or more supplier computers to **order** items to be **restocked** into the **dispensing unit** . 1 32. A method for supplying items to a plurality of **dispensing units** , the method comprising:

providing a plurality of **dispensing units** that each hold a plurality of at least one type of item, wherein the units have a processor and a memory for storing a record of

**inventory** levels of each item;

periodically sending **restocking** information from the **dispensing units** over a **network** to a **server** computer, wherein the **restocking** information includes a **restock** quantity for each item;

generating an aggregated list of items and their associated quantities that are to

be **restocked** based on the **restocking** information;

1 1 providing a hosted procurement application to permit manual selection of suppliers, manufacturers, and **quantities** for the **items** in the **aggregated** list; generating **ordering** information for the items to be **restocked** based on the

manual selection using the hosted procurement application;

**electronically** sending the **ordering** information to one or more supplier

computers to **order** items to be **restocked** into the **dispensing unit** .

33 A method as in claim 32, further comprising electronically posting desired items and quantities...

...quotes for supplying the supplies.

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34 A method as in claim 32, farther comprising **ordering items** that are not on the **aggregated** list using the hosted procurement application.

35 A method as in claim 32, further comprising...

...medium having ordering information on items and quantities to be stocked into a plurality of **dispensing units**, the ordering information further including suppliers of the items, and code to permit access to...

...purchase order.

37 A server computer comprising:

a processor;

code to poll a plurality of **dispensing units** over a **network** to obtain **restocking** information on quantities of items to be **restocked** into the **dispensing units**;

code to generate **ordering** information for items to be **restocked**;

a database to store the **restocking** information and the **ordering** information.

38 A server computer as in claim 37, further comprising code to send the ...item, wherein the units have a processor and a memory for storing a record of **inventory** levels of each item;

a server computer that is connectable to the dispensing units over a network to permit restocking information to be transmitted from the dispensing units to the **server** computer, wherein the **restocking** information includes a **restock** quantity for each item, wherein the **server** computer further includes code to generate **ordering** information for the **I O** items to be **restocked** based on the **restocking** information, and code to **electronically** send the **1 1** **ordering** information to one or more supplier computers to **order** items to be **restocked** into the **dispensing units**.

43 A system as in claim 42, wherein the server computer further includes code to...

15/3,K/9 (Item 6 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00833798 \*\*Image available\*\*

**INVENTORY CONTROL SYSTEM AND METHODS**

**PROCEDES ET SYSTEME DE GESTION DES STOCKS**

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Claims

#### Claim

1) An **inventory** management system comprising:  
one or more computers;  
one or more databases residing on said computers, in which **inventory**  
and customer information is stored;  
client software providing an interface to said database and performing...

...a user identification subsystem;  
a subsystem through which new products can be added to said **inventory**  
database, and which enables proper accounting of restocked products  
within said **inventory** database; and  
a subsystem which accounts for a product or products within said  
database as such products are removed from **inventory** .  
2) The **inventory** management system of Claim 1, in which one or more of  
said subsystems are comprised...

...optical reader which can read  
specially coded information on an object or person.  
3) The **inventory** management system of Claim 1, in which one or more of  
said subsystems are comprised...

...an electronic device for scanning  
wirelessly accessible identifiers associated with objects or persons.  
4) The **inventory** management system of Claim 1, in which said user  
identification subsystem is comprised of a biometric identification  
device.  
5) The **inventory** management system of Claim 1, in which said client  
software permits registration and removal of individual users, and  
modification of user information.  
6) The **inventory** management system of Claim 1, in which said client  
software allows users to be classified into groups, and where permissions  
or roles are assigned to such groups. - 35  
7) The **inventory** management system of Claim 1, in which said client  
software allows products to be grouped...

...specific or group specific labels or information to be included with  
each product removed from **inventory** .  
8) The **inventory** management system of Claim 1, in which said client  
software monitors **inventory** levels and reports anticipated shortages.  
9) The **inventory** management system of Claim 1, in which said client  
software monitors **inventory** levels and generates **orders** to cover  
anticipated shortages.  
10) The **inventory** management system of Claim 1, in which said client  
software allows users to **order** new products or to supplement **inventory**

when desired.

I 1) The **inventory** management system of Claim 1, in which said client software allows users to specify a price for goods for sale within an **inventory** .

12) A vendor managed **inventory** system, comprising:

one or more suppliers maintaining **inventory** utilizing an **inventory** management system;

one or more customers maintaining **inventory** utilizing an **inventory** management system;

central server, which facilitates communications and **inventory** management between said customers and said suppliers; and,

redundant data connection between said suppliers, said customers, and said central server.

13) The vendor managed **inventory** management system of Claim 12, in which

said central server receives **inventory** information from customers and suppliers, anticipates **inventory** shortages, generates **orders** to cover such

shortages, selects suppliers and products for such **orders** , places **orders**

with selected suppliers, and monitors **order** status.

14) An **inventory** distribution system comprising:

a **vending machine** ;

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a computer connected to said **vending machine** ;

software running on said computer;

a printer;

a user identification subsystem; and

a data entry subsystem.

15) The **inventory** distribution system of Claim 14, in which said user identification subsystem is comprised of a...

...through which users can positively identify themselves to said computer via said software. 16) The **inventory** distribution system of Claim 14, in which said data entry subsystem is comprised of an...

...passive user interface, and through which users can request dispensation of certain products. 17) The **inventory** distribution system of Claim 14, in which said printer prints product information when requested and as necessary to satisfy applicable regulations.

18) The **inventory** distribution system of Claim 14, further comprising a central **server** and a redundant data connection between said **vending machine** and said **server** .

19) The **inventory** distribution system of Claim 18, in which said computer

monitors distribution of products contained within said **vending machine** ,

transmits such distributions to said **server** via said redundant data connection, and through which said **server** can notify a **vending machine**

service provider of any **inventory** shortages. 20) A **automated** method of **inventory** management involving the steps of accounting for received products in an **inventory** ;

monitoring products as such products are removed from an **inventory** ;

calculating trends based on the frequency with which products are used;

determining optimal product quantities for each **order** , such that

shipping costs are reduced and price points for different quantities are taken into account while also reducing expenditures.

**ordering** additional stock as needed;

tracking said **orders** ;

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calculating **order** fulfillment trends based on delivery times from each supplier and for each product; and, determining preferred suppliers based on such **order** fulfillment trends.

21) The **automated inventory** management method of Claim 20, in which the

step of accounting for received products in an **inventory** involves **electronically** reading documentation supplied with each package and **automatically** updating **inventory** information to reflect package contents.

22) The **automated inventory** management method of Claim 20, in which the

step of monitoring products as such products are removed from an **inventory** involves **electronically** reading a product identifier associated with a product or group of products.

23) The **automated inventory** management method of Claim 20, further including the step of identifying a user removing products from an **inventory** by **electronically** retrieving an identifier from said user.

24) An **automated order** fulfillment method, comprising the steps of: receiving an availability and pricing request from a customer...

...selecting products, product quantities, and suppliers that provide the most

value while still meeting customer **inventory** needs;  
generating product pick and pack slips for each supplier;  
recording products as they are "picked" from a supplier **inventory** ;  
recording products as they are packed into shipping packages;  
generating package packing slips and shipping labels;  
correlating shipping and packing information;  
shipping said packages; and  
tracking said shipments.

25) The **automated order** fulfillment method of Claim 24, in which picked products are recorded by **electronically** scanning identifiers associated with such products. - 38

) The **automated order** fulfillment method of Claim 25, in which picked products are recorded by **electronically** scanning identifiers associated with

such products using a handheld computing device, to which a barcode scanner is attached. 27) The **automated order** fulfillment method of Claim 24, in which the step of recording products as they are...

...a shipping package prior to scanning

individual items packed into a shipping package. 28) The **automated order** fulfillment method of Claim 24, in which the packing and shipping labels include a machine readable identifier.

29) A vendor managed **inventory** and group purchasing system, comprising: one or more **servers** ;

one or more databases running on said **servers** ;  
client software running on one or more computers at a customer site, which is capable of monitoring customer **inventories** and reporting such information to said **server** via a redundant data communications connection;

client software running on one or more computers at...

...is capable of monitoring product quantities on hand and

supports multiple product prices depending on **order** quantities, and which is capable of transmitting such information to said **server** via a redundant data communications connection; and  
software running on said **server** that consolidates customer **orders**



such  
that customer costs may be decreased by leveraging the consolidated  
order quantities. - 39

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00806392  
TECHNOLOGY SHARING DURING ASSET MANAGEMENT AND ASSET TRACKING IN A  
NETWORK-BASED SUPPLY CHAIN ENVIRONMENT AND METHOD THEREOF  
PARTAGE TECHNOLOGIQUE LORS DE LA GESTION ET DU SUIVI DU PARC INFORMATIQUE  
DANS UN ENVIRONNEMENT DU TYPE CHAINE D'APPROVISIONNEMENT RESEAUTE, ET  
PROCEDE ASSOCIE

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Detailed Description

Detailed Description

... the client and mailed to him. The on-line terminals are not automatic  
self-service vending machines ; the client must deal with the company  
through agents.

In another example of a...or order may also be calculated, such as by  
taking into account handling costs, the total weight of the items ,  
the distance to final destination of the items, and the corresponding  
charges of the shipping...at an automated store, including the following  
steps.

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(b) receiving the customer's purchase order at a host computer in  
communication with the

interactive electronic network;  
(c) processing the customer...

15/3,K/11 (Item 8 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00787038 \*\*Image available\*\*  
SYSTEM AND METHOD FOR PROCESSING TOKENLESS BIOMETRIC ELECTRONIC  
TRANSMISSIONS USING AN ELECTRONIC RULE MODULE CLEARINGHOUSE  
SYSTEME ET PROCEDURE PERMETTANT DE TRAITER DES TRANSMISSIONS ELECTRONIQUES  
BIOMETRIQUES SANS AUTHENTIFICATION PAR L'UTILISATION D'UN CENTRE DE  
MODULES DE REGLEMENT ELECTRONIQUES

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Claims

Claim

amendments.

I

SYSTEM AND METHOD FOR PROCESSING  
TOKENLESS BIOMETRIC **ELECTRONIC** TRANSMISSIONS  
USING AN **ELECTRONIC** RULE MODULE CLEARINGHOUSE

Field of the Invention

The invention relates generally to computer systems designed to execute  
**electronic** transmissions on behalf of users. More specifically, this  
invention relates to tokenless biometric computer systems...

...smart cards, magnetic swipe cards or personal computers. This invention  
does not relate to any **automated** door lock or **automated** physical site  
access mechanisms.

#### Background of the Invention

The use of **electronic** transmissions has proliferated with the advent of personal computers, or "terminals", and improved communications **networks** such as the **Internet**. Billions of **electronic** transmissions are sent and received each year in the United States. An **electronic** transmission, as used herein, is defined as the accessing, processing, or presentation of **electronic** data, to include word-processed content, mathematical spreadsheets, emails, visual or graphic images, audible content, software code, pattern data, execution commands, computer software programs, **Internet web** sites, software rule modules, **electronic** instant messaging, and the like. Such **electronic** transmissions may take many forms, including: an **electronic** request for user-customized or user-unique access to stored database content; an **electronic** request to customize the processing of data according to user-customized or user-unique criteria; and an **electronic** request to present or display data in a pre-determined, user-customized format. It should be noted that user-customized is different from user-unique. 30 **Electronic** data or **electronic** transmissions which are customized to a user, or "usercustomized", have been customized by or for...

...which applies to one user may also apply similarly or identically to another user. However, **electronic** data or **electronic** transmissions which are unique to a user, or "user-unique", are distinctive and without equal, and hence are exclusive to that particular user. In sum, an **electronic** transmission is the accessing, processing, or presentation of any **electronic** data or content which does not in and of itself constitute or execute either: an **electronic** financial transaction wherein the exchange or alteration of any financial assets occurs, nor; an **automated** door lock or an **automated** physical site access mechanism. A result of the significant popularity of **electronic** transmissions has been a marketplace transition from using an off-line, individual desktop personal computing model to using an **on - line**, central- **server** communications model. Specifically, corporations and individual consumers are moving the main functions of storage, access, processing and presentation of their **electronic** transmissions from decentralized, unconnected desktop terminals, to centralized databases on **servers** which service and connect to **on - line** PCs, known as "client terminals", via dial-up, leased lines or wireless **networks**. In this transition, such client terminals are also increasingly being connected to each other. An integrated **web** of communications is forming that enormously expands the functions and benefits of using such clients, evidenced by fast growth of the **Internet** and corporate **intranets**. At the same time, cost reductions in miniaturizing computer hardware components have led to the...

...thin-clients is that they offer the potential for the user to send and receive **electronic** transmissions at virtually any time and from virtually anywhere. Many of these lower cost thin-clients access much of their processing and memory capacities **on - line** from remote **servers** via **Internet**, **intranet** or extranet connections. These thinclient devices include, but are not limited to: wireless pagers; wireless and tethered telephones; **network** computers; thin-client exercise machines; **electronic** books; public 30 access kiosks such as **automated** teller machines, **vending machines**, airport information terminals and or public kiosks; hand-held personal digital assistants such as Palm Pilots" and the like; **on - line** photocopy machines; automobile embedded **Internet** -connected appliances which download preferred radio stations, seat and temperature adjustments, and the like; thin...

...household appliances such as refrigerators, microwaves, and the like; thin-client home entertainment appliances including **on - line** televisions such as WebTVTM, portable digital audio systems such as the RiOTM , along with their associated remote controls. These two trends, of proliferating personal computing devices and of increased **on - line** communications usage, have led to a distinct problem: with so many personal computing devices, the user now has user-customized **electronic** data stored on multiple man-made memory devices, or "tokens", which the user must manage and possess for storage, access, processing and presentation of their **electronic** transmissions. Further, if the user wants all of these new computing tokens to possess the...

...subset of their information, then months, and perhaps years, of important personal and likely confidential **electronic** transmissions could be irretrievably lost, or revealed to an untrusted third-party. In sum, the multitude of such personal computing tokens, whether unconnected desktop terminals or **on - line** hand held thin clients, has exacerbated the problem of user-reliance on particularly vulnerable, customized...

...which can be easily damaged, lost or stolen. To protect these tokens and the resident **electronic** transmissions they contain, the use of various biometrics, such as fingerprints, hand prints, voice prints...

...been suggested for identification of individuals. However, because the biometrics are generally themselves stored in **electronic** , and thus reproducible, form on the ...containing a microchip in which is recorded characteristics of the authorized user's voice. In **order** to initiate the access procedure, the user must insert the token into a terminal such ...

...from the possibility of tampering greatly diminishes any improvement to fraud resistance resulting from the **replacement** of a numeric code with a biometrics. Further, the system remains cumbersome and inconvenient to use because it too requires the presentation of a personalized memory token in **order** to initiate an access request. Almost uniformly, prior art disclosing biometrics are token-based systems...computers. In view of the foregoing, there has long been a need for a computerized **electronic** transmissions system which enables the user to universally access, process and present their **electronic** transmissions with optimal convenience by not requiring the user to possess any man-made memory tokens on which must be stored the user's customized in **order** for the user to execute **electronic** transmissions. Further, there is a need for a tokenless computer system which is highly fraud...

...function for the user wherever and whenever the user may be using any generic **on - line** computing device, whether a desktop or a thin client, for conducting their **electronic** transmissions. Further, there is a need for a computing system that provides the user with centralized storage, access, processing and presentation of their **electronic** transmissions regardless of whether the personal computing device the user is using possesses only a...

...of their user-customized data at all. Further, there is a need for a computerized **electronic** transmissions system that provides the user with the above benefits whether or not the personal...

...from having to redundantly enter and update a variety of individual personal computing devices in **order** to achieve the same customized performance from any or all of such devices.

There is also a need for a computerized **electronic** transmissions system which relieves the user from having to redundantly data-enter their personal demographics and customized **Internet** usage activity information into a variety of **Internet** **web** sites in order to achieve uniformly customized service at each such **web** sites. Additionally, there is a need for a computerized **electronic** transmissions system which enables a user to benefit from executing customized and complex io commands governing their **electronic** transmissions regardless of whether the **on - line** computing device the user happens to be using is a high-powered desktop terminal or...

...computer processing or memory capabilities of its own. There is also a need for an **electronic** transmissions system that uses a strong link to the person being identified, as opposed to...

...any physical objects that can be freely transferred. There is a further need for an **electronic** transmissions system that ensures user convenience by enabling user-authorization without requiring the user to or more proprietary memory tokens, such as manmade user-customized portable memory devices, in order to effect **electronic** transmissions. Anyone who has lost a smart card or a traditional notebook personal computer, left...

...and immediately-felt inconvenience caused by such problems. Therefore, there is a need for an **electronic** biometric transmissions system that is entirely tokenless.

There is another need in the industry for a computerized **electronic** transmissions system that is sufficiently versatile to accommodate both users who desire to use personal...

...such a system must be affordable and flexible enough to be operatively compatible with existing **networks** having a variety of **electronic** transmission devices and system configurations.

Objectives of the Invention

It is an objective of the invention to provide a computerized **electronic** transmissions system and method that eliminates the need for a user to directly possess any...

...biometric sample for ensuring that only authorized users can access and conduct on their own **electronic** transmissions. It is another object of the invention to be a tokenless technology for ensuring that users have the portability and mobility to gain immediate access to their **electronic** transmissions via any **network** -connected interface, regardless of the resident capabilities of the computing device the user is using to interface with the computer **network** and a central **server** . It is another object of this invention, that any client terminal, such as a public computing kiosk without resident user-customized data and without extensive resident software, be **automatically** and nearly instantly transformed, via a user's 2o biometric log-on using this invention, into a terminal receiving **on - line** sophisticated computing capabilities that are customized for the user, complete with usercustomized **electronic** transmission accessing, processing and presentation. It is flu-ther an object of this invention that the user be able to receive customized presentation of- their own **Internet** **web** **portal** displaying all URLs with which the user has pre-registered for access privileges; personalized recommendations for local activities, events and people that reflect their priorities; their **Internet** **web** site preferences, or "bookmarks"; and their **Internet** "cookies", or that set of data that an **Internet** website **server** provides to a user each

time the user visits the website. It is further anIt is another object of this invention to provide a computerized **electronic** transmissions system centered around the user rather than any devices he may possess. In particular, this invention provides an **electronic** transmission system that is universally accessible to the user because he only needs his biometric to log onto a **network**, rather than having to rely on his having to possess any man-made memory tokens...

...communications model, the unit is any personalized memory token on which is stored user-customized **electronic** data, or io information, that is: a) customized and perhaps even unique to a single user, and; b) required to execute an **electronic** transmission based on **electronic** data customized to a particular user's specifications or preferences. As such, the use or presentation of that memory token is a requirement for the user to conduct **electronic** transmissions which contains content customized, if not unique, to the user's criteria. In this...

...no need for any memory token to be required by the user to execute an **electronic** transmission. This invention employs a user's biometric identification to enable a user to centrally store, access, process and present any customized **electronic** transmission independent of which computing device the user is using, whether it be 2o a...

...personal computing device are nearly irrelevant, so long as the device can connect to an **online network**, such as the **Internet**, and provides the user with basic biometric input, data input and data display means. Yet...

...any biometric input apparatus the user may be using, a user-customized gateway to the **Internet** containing their desired bookmarks, their personalized search engine and their customized **web** page directory. This is the user's personal **Internet web** page 44portal" which is a starting point for their **electronic** transmissions, including **electronic** mail, **Internet web** browsing or "surfing", and the like. A further object of this invention is that in all of these **electronic** transmissions, this invention provides the user the ability, with only a biometric log-on, to **automatically** enter all restricted or confidential third-party databases throughout the **Internet** to which the user has pre-authorized access privileges. It is another object of this invention that once the user has completed their **Internet** usage of the client terminal for a particular **on - line** session, all of the data stream from their **on - line** session, including all new cookies provided by third parties io on behalf of the user...invention is to provide a user with a central computerized data processing center, containing an **electronic** identicator and an **electronic** clearinghouse, for storage, accessing, processing and presenting their biometric and their user-customized **electronic** transmissions. As such, it is an objective of the invention to enable a user to...

...such data to include their biometric samples, their demographics, their computer function preferences, and their **on - line** activity or browsing patterns, and to thereby enable the user to have all such personal...

...third-party databases to correctly identify a user using the computer system so that their **on - line** activity patterns can be linked to that user's personal demographic database. In this way...

...manner to existing computing terminals currently installed at points of usage and used over the **Internet**. Yet another objective of the invention is to be efficiently and effectively operative with existing...

...and 15 protocols, specifically as these systems and protocols linked to the processing of **electronic** transmissions.

Summary of the Invention

Herein is described a tokenless biometric method for processing **electronic** transmissions, using at least one user biometric sample, an **electronic** identicator and an **electronic** rule module clearinghouse. The steps for processing of the **electronic** transmissions comprise of a user registration step, wherein a user registers with an **electronic** identicator at least one registration biometric sample taken directly from the person of the user user identification step, wherein the **electronic** identicator compares a bid biometric sample taken directly from the person of the user with...

...one previously designated rule module of the user is invoked to execute at least one **electronic** transmission. The above-mentioned steps are conducted in a manner wherein a biometrically authorized **electronic** transmission is conducted without the user presenting any personalized man-made memory tokens such as smartcards, or magnetic swipe cards. Preferably during the command execution step, the **electronic** rule module

clearinghouse communicates with one or more third-party computers, the third party computers...

...display database contents. Execution commands are comprised of any of the following, accessing stored **electronic** data customized to the user's rule modules, processing **electronic** data customized to the user's rule modules, and presentation of **electronic** data customized to the user's rule modules. Pattern data comprises of any of the...

...user unique identification code, demographic information, an email address, a financial account, a secondary biometric, **internet** browsing patterns, a non-financial data repository account, a telephone number, a mailing address, purchasing patterns, data on pre-paid accounts or memberships for products or services, **electronic** data usage patterns, employee status, job title, data on user behavior patterns, a digital certificate, a **network** credential, an internet protocol address, a digital signature, an encryption key, an instant messaging address, personal medical records, an **electronic** audio signature, and an **electronic** visual signature. The pattern data for a user is provided for the rule module by any of the following entities, the user, the **electronic** rule module clearinghouse, or an authorized third party. The execution command for a user is provided for the rule module by any of the following; the user, the **electronic** rule module clearinghouse, or an authorized third party.

Preferably a user re-registration check step...

...is alerted to the fact that the user has attempted to re-register with the **electronic** identicator. It is understood that the bionietric sample comprises any of the following: a fingerprint...

...the invention, during the identification step, the user provides a personal identification code to the **electronic** identicator along with a bid biometric sample for purposes of identifying the user. In yet...

...io sample is determined to have been fraudulently duplicated.

In a different embodiment, accessing stored **electronic** data results in activation of an **internet** -connected device, such as an exercise device that is connected to the **Internet** . In a different embodiment, processing comprising of data includes invoking any of the following; a

user's digital certificate, a user's identity scrambler, a user's interactive **electronic** consumer loyalty or consumer rewards program, a user's interactive **electronic** advertising, a user's interactive instant messaging program, a user's email authentication, and an **automated electronic** intelligent agent for **electronic** data search and retrieval that is customized to the user's requests. Preferably, the invention comprises a user log-in repeat step, wherein during an **electronic** transmission the user is periodically required by the **electronic** identicator to present the user's bid biometric sample or at least one of the...

...comprises a third-party registration step, wherein a third-party registers identification data with the **electronic** identicator, the identification data comprising any of the following; a biometric, a digital certificate, an **internet** protocol address, or a biometric input apparatus hardware identification code. In a third-party identification step, a third-party providing the user with **electronic** transmissions is identified by the **electronic** identicator by comparing the third-party's bid identification data with the third-party's registered identification data. A computer system device for tokenless biometric processing of **electronic** transmissions, using at least one user biometric sample, an **electronic** identicator and an **electronic** rule module clearinghouse, comprises a biometric input apparatus, for providing a bid or registration biometric sample of a user to the **electronic** identicator; wherein a user registers with an **electronic** identicator at least one registration biometric sample taken directly from the person of the user; an **electronic** rule module clearinghouse, having at least one rule module further comprising at io least one...

...associated with at least one execution command of the user, for executing at least one **electronic** transmission; an **electronic** identicator, for comparing the bid biometric sample with registered biometric samples of users; a command execution module, for invoking at least one previously designated execution command in the **electronic** rule module clearinghouse to execute an **electronic** transmission; wherein no man-made memory tokens such as smartcards, or magnetic swipe cards are presented by the user to conduct the **electronic** transmission.

Preferably the command execution module communicates with one or more third-party computers. Pattern...

...a mailing address, purchasing patterns, data on prepaid accounts or memberships for products or services, **electronic** data usage patterns, employee status, job title, data on user behavior patterns, a digital certificate, a **network** credential, an internet protocol address, a digital signature, an encryption key, an instant messaging address, personal medical records, an **electronic** audio signature, and an **electronic** visual signature. The pattern data for a user is provided for the rule module by any of the following; the user, the **electronic** rule module clearinghouse, or an authorized third party. An execution command for a user is provided for the rule module by any of the following; the user, the **electronic** rule module clearinghouse, or an authorized third party

In another embodiment of the invention a tokenless biometric method for processing **electronic** transmissions, using at least one user biometric sample, an **electronic** identicator and an **electronic** rule module clearinghouse, said method comprising the steps of a primary and subordinated user registration step, wherein a primary and subordinated user each register with an **electronic** identicator at least one



registration biometric sample taken directly from the person of the primary...

...command of the primary and subordinated user. In a subordinated user identification step, wherein the **electronic** identifier compares a biometric sample taken directly from the person of the subordinated user...

...designated execution

p

command of the primary user is invoked to execute at least one **electronic** transmission; wherein a biometrically authorized **electronic** transmission is conducted without the primary and subordinated user presenting any personalized man-made memory...

...providing a significantly improved system and method for tokenless accessing, processing and presentation of **3o electronic** transmissions requiring only a user biometric.

The present invention is significantly advanced

over the...

15/3,K/12 (Item 9 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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00554418 \*\*Image available\*\*

**METHOD AND APPARATUS FOR AUTHENTICATING VENDING MACHINE SALES DATA**

**PROCEDE ET APPAREIL D'AUTHENTIFICATION DE DONNEES RELATIVES AUX VENTES DE DISTRIBUTEUR AUTOMATIQUE**

Patent Applicant/Assignee:

WALKER DIGITAL LLC,  
TEDESCO Daniel E,  
JORASCH James A,

Inventor(s):

TEDESCO Daniel E,  
JORASCH James A,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200017791 A1 20000330 (WO 0017791)

Application: WO 99US18426 19990812 (PCT/WO US9918426)

Priority Application: US 98157150 19980918

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE  
GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK  
MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN  
YU ZA ZW GH GM KE LS MW SD SL SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE  
CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN  
GW ML MR NE SN TD TG

Publication Language: English

Fulltext Word Count: 7183

Main International Patent Class: **G06F-017/60**

Fulltext Availability:

Detailed Description

Detailed Description

... Other prior art devices rely on increased accessibility to vending

machine sales data through new **electronic** communications protocols and through hand-held data collection devl@es. New communication protocols enable the...

...to vending machines sales data. For example, operators use cellular technology to monitor changes in **inventory** . Even power lines have been used to monitor vending machine sales data, as illustrated in...

...been

I 0 employed by operators to download sales data from vending machines during the **restocking** process. The downloaded data is stored for subsequent evaluation. The downloaded sales data may include "product turns" and "out of **orders** ." Examples of such devices include the AUDITPRO 2000, manufactured by Hamilton Mfg. Corp. of Holland...

15/3,K/13 (Item 10 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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00498908 \*\*Image available\*\*

**VENDING MACHINE DISPLAYING THE ON-LINE INFORMATION AND THE DIGITAL VIDEO IMAGES**

**DISTRIBUTEUR AUTOMATIQUE AFFICHEUR D'INFORMATION EN LIGNE ET D'IMAGES VIDEO NUMERIQUES**

Patent Applicant/Assignee:

KIM Byung Hee,  
CHUNG Young Hun,

Inventor(s):

KIM Byung Hee,  
CHUNG Young Hun,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9930260 A1 19990617

Application: WO 98KR2 19980109 (PCT/WO KR9800002)

Priority Application: KR 9766805 19971208

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AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM  
GW HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX  
NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW GH  
GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH DE DK ES FI  
FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG

Publication Language: English

Fulltext Word Count: 3483

Main International Patent Class: **G06F-017/60**

Fulltext Availability:

Claims

Claim

... system,

monitor 109 displaying the video signal from the  
multi-video device 108.

3 The **vending machine** displaying the **on - line**  
information and digital video images as claimed in claim 1,  
wherein the said multi-video...

...signal (108e) to the TV signal (108g) ,

a watchdog timer part 108c transmitting the reset  
**order** to the entire system if the signal selection has no  
change within the given time...

...reset the system,  
a reset terminal 108i generating the initializing  
signal according to the reset **order** of the watchdog timer  
part 108c.

#### AMENDED CLAIMS

[received by the International Bureau on 19 February 1999 (19 99  
original claims 1, 2 and 3 **replaced** by new claims 1, 2 and 3 (2 pages))]

1 . The **vending machine** displaying the **on - line**  
information and the digital video images comprises:  
a **vending machine** part 200 including a. microprocessor  
201 transmitting the product sales information signal to  
the communication...

...saved in  
the external memory 107 after receiving the product sales  
information from the above **vending machine** part 200, and  
displaying those files using the multi-video device 108  
after receiving the VGA and MPEG files from the computer  
**network** .

2 The vending machine displaying the on-line  
information and the digital video images as...

15/3,K/14 (Item 11 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00356284 \*\*Image available\*\*

**A VENDING MACHINE, A VENDING SYSTEM AND METHODS FOR OPERATING SAME**  
**DISTRIBUTEUR AUTOMATIQUE, SYSTEME DE DISTRIBUTION AUTOMATIQUE ET PROCEDES**  
**D'EXPLOITATION ASSOCIES**

Patent Applicant/Assignee:

BRUN Heidi M,  
TEICHER Mordechai,

Inventor(s):

TEICHER Mordechai,

Patent and Priority Information (Country, Number, Date):

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Application: WO 95US6882 19950607 (PCT/WO US9506882)

Priority Application: IL 113980 19950601

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KR KZ LK LR LT LU LV MD MG MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ  
TM TT UA UG UZ VN KE MW SD SZ UG AT BE CH DE DK ES FR GB GR IE IT LU MC  
NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG

Publication Language: English

Fulltext Word Count: 11292

Main International Patent Class: **G06F-017/60**

Fulltext Availability:

Detailed Description

Detailed Description

... particularly suitable for local environments, for

serving customers within the boundaries of a local communication **network** . It is particularly useful in maintained, In Fig. 11A, the card payment unit 103 receives...card 1101A provided with a link to a remote bank or credit account, or the **electronic checkbook@1101B** provided with a link to a local account, If a local account card...

...authorizing

access to a remote bank or credit account of the customer, for payment and **replenishment** transactions as described in detail hereinbelow, The information required in **order** to use the customer's remote account is recorded in the respective local account in the database 1119 of the local computer 1130, If an **electronic checkbook 1101B** is to be used with the card payment unit of Fig, 11A, the...

...5,206,488 to Teicher is

preferably applied to allow the customer to use his **electronic checkbook 1101B** to establish and use-a local account in the local account database 1119, Both the local account card 1101A and the **electronic checkbook 1101B** include an external interface 1103 which allows them to interface with the card...

...coordinating between payment executed at local

computer 1130 and the control unit 105 of the **vending machine 100**,

The local computer 1130 includes a merchant interface and memory 1114 allowing the merchant, i.e. the **vending machine** owner or operator, schematically referenced 1121 to input and store information, such as the minimal...

...card

validation criteria, The local computer 1030 also comprises a transaction selector 1115 which selects **automatically** the type of transaction in response to the payment sum, the balance in the local...

...account payment

unit 1117, a remote account payment unit 1118 or via the local account **replenishment** unit 1124. It will be appreciated that a transaction conducted via the local **replenishment** unit 1124 involves a sequence of transactions as described hereinbelow, The local account payment unit...

...the respective local account in local

account database 1119, It will be appreciated that in **order** to register in the data base 1119 a customer using a local account card,, such...accounts in 1122, with or without additional information provided by customer 1123, The local account **replenishment** unit 1124 includes the hardware, protocols and security means needed to execute **replenishment** of a local account in 1119 by payment from a remote bank and/or credit...

...either of the payment cards of Fig, 11A, In its idle state referenced 1141, the **vending machine** 100 having a maximal possible purchase value \$MAXP provided by the merchant 1121 is ready...

...a purchase to be made, In step 1142, the local account card 1101A or the **electronic** checkbook 1101B is received by the card payment unit 103. It will be appreciated that...

...card can be retained in the card payment unit as described with reference to the **vending machine** 300, or may be swiped therethrough as described with reference to the **vending machine** 700, Then, the payment card is checked for its validity as indicated by block 1143...

...and display unit 102 as indicated by block 1045, It will be appreciated that the **vending machines** which operate with the card payment unit 103 of Fig. 11A, are particularly suitable for...

...credit account identified via the local account in the data base 1119 or via the **electronic** checkbook 1101B as indicated by block 1148, If \$SUM is smaller than \$MINCT, i.e...

...the payment is found unfeasible for local account payment, and therefore the local account is **replenished** at least with the sum of \$MINCT from the respective bank or credit account through...MINCT, the payment from the local account indicated by block 1152 is guaranteed after **replenishment** with at least the sum of \$MINCT as indicated by 1153, When payment is completed...

...customer if a card payment unit similar to 308 (Fig\* 3A) is used and the **vending machine** 100 is ready for the next purchase as indicated by 1141\* According to another preferred...

...Another example is that any of the transactions described hereinabove may be off-line or **on - line** transactions, If desired, the transactions may be recorded in a local memory (not shown) of any of the **vending machines**, such as the **vending machine** 100 and may be executed, for example in **order** to save communication costs, as a daily batch to the appropriate central transactions system of the banks or the credit companies involved, Another example is to employ the **inventory** splitting unit to facilitate the **replenishment** of the **inventory** in a desired fashion, If the **inventory** includes a plurality of pre-packaged boxes of identical items as part thereof, the **inventory** splitting unit may allow access to items from one box first, and only when the...

...from this box  
are removed, access to the next box will be allowed. This  
way, **replenishment** of the **inventory** can be done by whole  
pre-packaged boxes instead of by single items,  
It will...

15/3,K/15 (Item 12 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00324637

**SYSTEM FOR MANAGING MULTIPLE DISPENSING UNITS AND METHOD OF OPERATION**  
**SYSTEME DE GESTION D'ENSEMBLES DISTRIBUTEURS MULTIPLES ET PROCEDE**  
**D'EXPLOITATION**

Patent Applicant/Assignee:

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Inventor(s):

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POHRTE Tom R,

ROSS Jack A,

SADLER Ray G,

Patent and Priority Information (Country, Number, Date):

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Priority Application: US 94300483 19940901

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AM AT AU BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GE HU IS JP KE KG KP  
KR KZ LK LR LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK  
TJ TM TT UA UG UZ VN KE MW SD SZ UG AT BE CH DE DK ES FR GB GR IE IT LU  
MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG

Publication Language: English

Fulltext Word Count: 18887

Main International Patent Class: **G06F-017/00**

Fulltext Availability:

Detailed Description

Claims

Detailed Description

... change

parameters within the database files in database 42.

Message processor 54 further includes an **order** generation  
module operable automatically ...drivers and to schedule what equipment  
and parts need to be taken to service each **dispensing**  
**unit** 10, Message processor 54 prepares **orders** for  
products to stock **dispensing units** 10 and prepares **orders**  
for repair of **dispensing units** 10, Message processor 54  
maintains entries in repair log 48 and stock log 50 to...

...stocking service visits,

respectively, External interface 55 provides access to  
information management system, external to **dispensing**  
**unit** controller system 14,

Operator interface 56 provides a direct user  
interface for a user of **dispensing unit** controller  
system 14, Operator interface 56 allows a user to

provide information to and receive information from  
**dispensing unit** controller system 14,  
Operator interface 56 is coupled to file maintenance  
module 58 to allow...

...dispatching module 62  
to allow a user to invoke dispatching module 62 to  
generate **restocking** and repair dispatches,  
File maintenance module 58 provides maintenance of  
the database files and other...

...62.

Dispatching module 62 operates automatically to  
generate dispatch orders for repair and restocking of  
**dispensing unit** 10, Dispatching module 62 can  
cross-reference **orders** with closely located **dispensing**  
**units** 10 and with polling groups of **dispensing units** 10.

Dispatching module 62 requests polling of dispensing  
units 10 depending upon the age of...repair vehicles and collection of  
repair history,  
(iv) collection, generation and rooting of dispensing  
unit **restocking orders**, (v) collection of **dispensing unit**  
sales history, (vi) file maintenance of database master  
files, (vii) reporting and analysis utilities and...

...A technical advantage of the present invention is  
that it provides real-time information about **dispensing**  
**units** 10 and vending operations to a user of **dispensing**  
**unit** controller system 14, **Dispensing unit** controller  
system 14 processes incoming information from **dispensing**  
**units** 10 in a real-time mode.

According to one embodiment of the present  
invention, dispensing...

...dispensing unit message  
history and sales history in history file 52. Message  
processor 54 generates **restocking orders** and generates  
**automatic** polling messages, Message processor 54  
periodically purges communication log 44, repair log 48,  
stock log 50 and history file 52. Message processor 54  
ur'Ndates such information as **dispensing unit** version  
number, the communication **network** type and the modem  
identification code in master file 46 whenever a message  
received from a **dispensing unit** 10 contains different  
values from those in master file 46, Message  
processor 54 also prepares system and bin initialization  
messages for transmission to **dispensing units** 10 in  
response to a cold-start message, or when corresponding  
parameters in the master...

...46 change, Further,  
message processor 54 makes entries in repair log 48 in  
response to **dispensing unit** initialization failure and  
system failure messages, incoming messages from unknown  
**dispensing units** and **dispensing units** not responding to  
status request messages,  
Operator Interface

Operator interface 56 of **dispensing unit** control system 14 provides general user access, Multiple users may access **dispensing unit** controller system 14 independent of the ongoing activity of the other processes. A user is allowed to interface with **dispensing unit** controller system 14 to perform a number of functions.

A user may perform an on...another dispensing unit 10 in the inventory group.

When restocking orders are printed for delivery, **dispensing units** 10 are **automatically** polled and the **order** is updated to make deliveries as accurate as possible. **Dispensing unit** controller system 14 then verifies that the reported low stock product is not available in another **dispensing unit** belonging to a common polling group or **inventory** group. If the product is available, no further action is taken. If the product is not available, a stocking **order** is generated, When a stocking **order** is created, an adjustment is then made for the expected sales between the time the **order** is created and the time when **dispensing unit** 10 is expected to be serviced. The current sales quantity for each bin 20 in **dispensing unit** 10 is calculated by subtracting the current **inventory** as reported in the last status message from the bin capacity as stored in master file 46. The **dispensing unit** restocking schedule and the **dispensing unit** daily sales history are then examined to total the daily sales quantities for the next...

...preceding it, The total is added to the current sales quantity resulting in the actual **order** quantity for that bin. After **order** quantities are calculated for bins 20 in **dispensing unit** 10, the **orders** are stored in stock log 50 for later dispatching, Stock log 50 is searched for **orders** that are older than a user defined period of time, The **dispensing units** having old **orders** are polled and the updated information is used to recalculate the **order** as prescribed above. Once the **order** is accurate, **dispensing unit** polling groups are used to determine if any other **dispensing units** are to be serviced during the same delivery. If other **dispensing units** are to be serviced, history file 52 is scanned for **inventory** information. If current **inventory** status is not available, the **dispensing unit** is polled to obtain that information and an **order** is created as before. Once all the **orders** are generated, the **orders** are assigned to different delivery trucks and route drivers.

A user is further enabled to...an inventory group number and an inventory group name and description.

There is also a **dispensing unit** polling group master file to allow grouping of individual **dispensing units** for polling with status request messages. This file includes a polling group number and a polling group name description.



A **dispensing unit** restocking group master file is also held by master file 46. This restocking group master file has a record for each **dispensing unit** restocking group. **Dispensing unit** restocking groups link groups of delivery trucks to the **dispensing units** they service. This file is used for scheduling of vehicles to deliver restocking orders to **dispensing units**. This file includes a restocking group number and a group name description,

A delivery truck master file is included in master file 46. This file has a record for each **dispensing unit** restocking vehicle in the system and contains: a vehicle identification number, a restocking group number and a current route driver number. Master file 46 also includes a **dispensing unit** repair group master file.

This file has a record for each **dispensing unit** repair group. **Dispensing unit** repair groups link groups of repair trucks to the **dispensing units** they service. This file is used for repair dispatching and contains a repair group number...

...There is further a repair truck master file. This file has a record for each **dispensing unit** repair vehicle in the system and contains a vehicle identification, a repair group number, and a current route driver number, Master file 46 also includes a **dispensing unit** restocking order header file. This file identifies a restocking order for the next servicing of each **dispensing unit** 10. The restocking order is generated automatically when a **dispensing unit** 10 sends a low stock message or when a **dispensing unit** is polled for restocking purposes by **dispensing unit** controller system 14, A restocking order is retained for a user controlled period of time and includes: a **dispensing unit** number, a delivery date, a delivery route number, a delivery sequence and a total quantity in order.

Master file 46 further includes a **dispensing unit** restocking order detail file, This file contains the product inventory restocking detail by bin, The current bin inventory is subtracted from the bin capacity to determine the order quantity. This file includes a **dispensing unit** number, a delivery date, a bin number, a product number and an order quantity, History file 52 includes combined **dispensing unit** message and restocking history retained for a user controlled period of time, A restocking record is created in history file 52 by message processor 54 every time a **dispensing unit** 10 sends a message to **dispensing unit** controller system 14, History file 52 includes records having a **dispensing unit** serial number, a date and time of a message, a current network identification code, a current **dispensing unit** identification code on the network, a current **dispensing unit** controller identification code, a **dispensing unit** software version and application version, an amount of money in the cash

box, a route...

...time of servicing, This status includes a message reason code, a communications retry count, a **dispensing unit** status code, a temperature and a number of bins.

History file 52 further includes a combined **dispensing unit** message and bin history file. A bin record is created in history file 52 by message processor 54 every time a **dispensing unit** sends a message to **dispensing unit** controller system 14 regarding product inventory. The data in these records includes: a **dispensing unit** serial number, a date and time of servicing, a bin number, a bin status code...

...currently in the bin and a current product price, History file 52 further includes a **dispensing unit** sales history file that holds sales per bin per unit of time. The data is retained for a user controlled period of time, The file contains: a **dispensing unit** serial number, a bin number, a date, a collection period and a number of vends...

#### Claim

... plurality of dispensing units at the central facility; and processing the status messages to generate **restocking** and repair orders for the plurality of **dispensing units**.

41 The method of Claim 40, further comprising the step of transmitting, prior to the...

?

Set	Items	Description
S1	76483	INVENTORY OR INVENTORIES
S2	242283	RESTOCK? OR RE()STOCK? OR REPLENISH? OR REPLAC?
S3	2854981	ONLINE OR ON()LINE OR INTERNET OR INTRANET? OR NETWORK? ? - OR SERVER? ? OR WEB? OR PORTAL? OR WWW OR CYBER? OR ELECTRONI- C? OR AUTOMAT?
S4	3063	(DISPENSING OR VENDING) () (MACHINE? OR UNIT? ?)
S5	896858	CUMULATIVE OR AGGREGAT? OR TOTAL?
S6	1834884	VALUE? ? OR QUANTITY OR QUANTITIES OR AMOUNT OR ITEM? ?
S7	1652772	ORDER? ? OR ORDERING
S8	33498	S5(5N)S6
S9	971	S8(10N)S7
S10	0	S9 AND S4
S11	33	S9 AND S2
S12	43	S4 AND S2 AND S3
S13	76	S11 OR S12
S14	61	S13 NOT PY>2000
S15	61	RD (unique items)

? show file

File 2:INSPEC 1898-2005/Dec W2  
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File 35:Dissertation Abs Online 1861-2005/Dec  
(c) 2005 ProQuest Info&Learning  
File 65:Inside Conferences 1993-2005/Dec W4  
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File 99:Wilson Appl. Sci & Tech Abs 1983-2005/Oct  
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File 474:New York Times Abs 1969-2005/Dec 28  
(c) 2005 The New York Times  
File 475:Wall Street Journal Abs 1973-2005/Dec 28  
(c) 2005 The New York Times  
File 583:Gale Group Globalbase(TM) 1986-2002/Dec 13  
(c) 2002 The Gale Group  
File 256:TecInfoSource 82-2005/Feb  
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15/5/1 (Item 1 from file: 2)  
DIALOG(R)File 2:INSPEC  
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07782800 INSPEC Abstract Number: C2001-01-1290F-091

**Title: Optimal ordering method under the limited capacity for multi-items by the margin stock ratio**

Author(s): Mitsukuni, K.; Tomita, Y.; Tsushima, I.; Komoda, N.

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Language: Japanese Document Type: Journal Paper (JP)

Treatment: Theoretical (T)

Abstract: The new re-order system aims to prevent running out of stock, to limit **replenishment** quantities and to keep reasonable stock level for multi-items. In the lot-size re-order system and the interval re-order system, **replenishment** intervals or quantities are determined by the each system after **replenishment** items are decided. When both re-order systems run for multi-items, **total replenishment quantities** are usually over or under the limited capacity. The problem of the limited capacity was solved by the production scheduling or supply lead-time delay. We propose optimal ordering method (OOM) to be controlled by the margin stock ratio under the limited capacity. Margin stock ratio is defined by the prediction of the out-of-stock situation that is calculated by the available stock of inventory and necessary demand quantities of supply lead-time period. After each item is arranged by the margin stock ratio, **replenishment** items are determined under the limited capacity. This new method has been applied to a window frame manufacturing process successfully. (8 Refs)

Subfile: C

Descriptors: optimisation; stock control

Identifiers: optimal ordering method; limited capacity; multi-item ordering; margin stock ratio; **replenishment** quantities; lot-size re-order system; interval re-order system; production scheduling; supply lead-time delay; OOM; window frame manufacturing process

Class Codes: C1290F (Systems theory applications in industry); C1180 (Optimisation techniques)

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15/5/2 (Item 2 from file: 2)  
DIALOG(R)File 2:INSPEC  
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07530084 INSPEC Abstract Number: C2000-04-7160-054

**Title: Evaluation of optimal ordering method for coupling point production system**

Author(s): Mitsukuni, K.; Tsushima, I.; Komoda, N.

Author Affiliation: Div. of Bus. & Inf. Syst. Dev., Hitachi Ltd., Kawasaki, Japan

Conference Title: 1999 7th IEEE International Conference on Emerging Technologies and Factory Automation. Proceedings ETFA '99 (Cat. No.99TH8467) Part vol.2 p.1469-74 vol.2

Editor(s): Fuertes, J.M.

Publisher: IEEE, Piscataway, NJ, USA

Publication Date: 1999 Country of Publication: USA 2

vol.(xxiv+xviii+1573) pp.

ISBN: 0 7803 5670 5 Material Identity Number: XX-1999-03441

U.S. Copyright Clearance Center Code: 0 7803 5670 5/99/\$10.00

Conference Title: 1999 7th IEEE Conference on Emerging Technologies and Factory Automation. Proceedings ETFA'99

Conference Sponsor: IEEE Ind. Electron. Soc.; IEEE Robotics & Autom. Soc.; Univ. Politecnica de Catalunya

Conference Date: 18-21 Oct. 1999 Conference Location: Barcelona, Spain

Language: English Document Type: Conference Paper (PA)

Treatment: Practical (P)

Abstract: A new ordering system aims to prevent running out of stock, to limit **replenishment** quantities and to keep reasonable stock levels for multiple items. In the lot-size re-order system and the interval re-order system, **replenishment** intervals or quantities are determined by each system after **replenishment** items are decided. When both re-order systems run for multiple items, the total **replenishment** quantity usually exceeds the limited capacity. The problem of limited capacity was solved by production scheduling or supply lead-time delay. We propose an optimal ordering method, to be controlled by the margin stock ratio under limited capacity. The margin stock ratio is defined by the prediction of the out-of-stock situation that is calculated by the available inventory stock and by the demand quantities of the supply lead-time period. After each item is arranged according to the margin stock ratio, **replenishment** items are determined under the limited capacity. This new method has been successfully applied to a window-frame manufacturing process. (8 Refs)

Subfile: C

Descriptors: delays; optimal control; production control; scheduling; stock control data processing

Identifiers: optimal ordering method; coupling-point production system; **replenishment** quantities; multiple-item stock levels; lot-size re-order system; interval re-order system; limited capacity; production scheduling; supply lead-time delay; margin stock ratio; out-of-stock situation; inventory stock; window-frame manufacturing process

Class Codes: C7160 (Manufacturing and industrial administration); C1330 (Optimal control); C3350Z (Control applications in other industries)

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15/5/3 (Item 3 from file: 2)

DIALOG(R) File 2:INSPEC

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07514647 INSPEC Abstract Number: C2000-04-7180-003

Title: **Controlling a Java enabled Pepsi(R) vending machine over the World Wide Web**

Author(s): Webster, R.W.; Ross, P.W.; Bailey, T.M.; Conrad, S.M.; Fiorill, M.J.; Flinchbaugh, J.M.; Velkly, E.A.

Author Affiliation: Dept. of Comput. Sci., Millersville Univ., PA, USA

Conference Title: IECON'99. Conference Proceedings. 25th Annual Conference of the IEEE Industrial Electronics Society (Cat. No.99CH37029)

Part vol.1 p.86-90 vol.1

Publisher: IEEE, Piscataway, NJ, USA

Publication Date: 1999 Country of Publication: USA 3 vol. xiv+1509 pp.

ISBN: 0 7803 5735 3 Material Identity Number: XX-2000-00015

U.S. Copyright Clearance Center Code: 0 7803 5735 3/99/\$10.00

Conference Title: IECON'99. Conference Proceedings. 25th Annual Conference of the IEEE Industrial Electronics Society

Conference Date: 29 Nov.-3 Dec. 1999 Conference Location: San Jose, CA, USA

Language: English Document Type: Conference Paper (PA)  
Treatment: Practical (P)

**Abstract:** This paper describes an experimental Java client- server system and a special purpose hardware interface to control a Pepsi(R) vending machine over the World Wide Web . This system allows users with pre-paid accounts to vend a soda from the Pepsi(R) machine (without any coins or bills) using a web browser such as Netscape or Internet Explorer. Anyone with a web browser may find out if any of his or her favorite sodas are left in the machine. The server software can also notify the vending corporation, via Internet e-mail, when each brand of soda needs to be restocked . The software includes a Java applet (the client) and a multi-threaded Java server . The computer system, an Intel based Linux machine, runs its own web server and is physically located inside the Pepsi(R) machine. (7 Refs)

Subfile: C

Descriptors: client- server systems; information resources; Java; online front-ends; retail data processing

Identifiers: pre-paid accounts; Pepsi vending machine control; World Wide Web ; Java client- server system; hardware interface; web browser; Netscape; Internet Explorer; vending corporation; Internet e-mail; Java applet; multi-threaded Java server ; computer system; Intel based Linux machine

Class Codes: C7180 (Retailing and distribution computing); C5620 (Computer networks and techniques); C7210N (Information networks); C6150N (Distributed systems software)

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15/5/4 (Item 4 from file: 2)

DIALOG(R) File 2:INSPEC

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07283472 INSPEC Abstract Number: C1999-08-1290F-033

**Title:** Model development for deteriorating inventory in material requirement planning systems

Author(s): Hui-Ming Wee; Yu-Su Shum

Author Affiliation: Dept. of Ind. Eng., Chung Yuan Christian Univ., Chung Li, Taiwan

Journal: Computers & Industrial Engineering vol.36, no.1 p.219-25

Publisher: Elsevier,

Publication Date: Jan. 1999 Country of Publication: UK

CODEN: CINDDL ISSN: 0360-8352

SICI: 0360-8352(199901)36:1L.219:MDDI;1-A

Material Identity Number: C222-1999-001

U.S. Copyright Clearance Center Code: 0360-8352/99/\$20.00

Document Number: S0360-8352(99)00003-0

Language: English Document Type: Journal Paper (JP)

Treatment: Theoretical (T)

**Abstract:** The purpose of this study is to develop an optimal replenishment policy for deteriorating inventory in a single-level MRP system. The analysis in this study is based on the approaches by the Wagner-Whitin, the Silver-Meal and the least-unit-cost methods. Two numerical examples are provided to illustrate the theory of the problem. From the numerical analysis it is demonstrated that the order quantity and the total relevant cost are significantly influenced by the varying rate of deterioration. (8 Refs)

Subfile: C

Descriptors: optimisation; production control; stock control

Identifiers: optimal replenishment policy; inventory; single-level MRP system; order quantity; total relevant cost; material requirement planning

Class Codes: C1290F (Systems theory applications in industry); C7480 (Production engineering computing); C1180 (Optimisation techniques)  
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15/5/5 (Item 5 from file: 2)

DIALOG(R)File 2:INSPEC

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06950234 INSPEC Abstract Number: C9808-1290F-010

**Title: Order-level lot-size system when random chance of discounts is offered**

Author(s): Gor, A.S.; Shah, N.H.

Author Affiliation: Dept. of Math., Gujarat Univ., Ahmedabad, India

Journal: International Journal of Modelling and Simulation vol.18, no.1 p.82-3

Publisher: IASTED,

Publication Date: 1998 Country of Publication: USA

CODEN: IMSIEK ISSN: 0228-6203

SICI: 0228-6203(1998)18:1L.82:OLSS;1-Z

Material Identity Number: K607-98002

Language: English Document Type: Journal Paper (JP)

Treatment: Theoretical (T)

Abstract: A deterministic order-level inventory system is developed for evaluating alternative discount proposals and selecting a **total replenishment quantity** and **order level**. A model is supported with a numerical example. (4 Refs)

Subfile: C

Descriptors: random processes; stock control

Identifiers: order-level lot-size system; random chance; alternative discount proposals; deterministic order-level inventory system; **total replenishment quantity**

Class Codes: C1290F (Systems theory applications in industry); C1140Z (Other topics in statistics)

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15/5/6 (Item 6 from file: 2)

DIALOG(R)File 2:INSPEC

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06597583 INSPEC Abstract Number: A9714-8120L-004

**Title: Numerical simulations of sintering, application to partially densified aerogels**

Author(s): Olivi-Tran, N.; Jullien, R.

Author Affiliation: Lab. de Sci. des Mater. Vitreux, Univ. des Sci. et Tech. du Languedoc, Montpellier, France

Journal: Journal of Sol-Gel Science and Technology Conference Title: J. Sol-Gel Sci. Technol. (Netherlands) vol.8, no.1-3 p.813-17

Publisher: Kluwer Academic Publishers,

Publication Date: 1997 Country of Publication: Netherlands

CODEN: JSGTEC ISSN: 0928-0707

SICI: 0928-0707(1997)8:1/3L.813:NSSA;1-G

Material Identity Number: D214-97001

U.S. Copyright Clearance Center Code: 0928-0707/97/\$8.50

Conference Title: 8th International Workshop on Glasses and Ceramics from Gels

Conference Date: 18-22 Sept. 1995 Conference Location: Faro, Portugal

Language: English Document Type: Conference Paper (PA); Journal Paper (JP)

Treatment: Theoretical (T)

Abstract: Following recent scaling theories, the sintering of silica aerogels is modeled starting from computer generated gel structures obtained by diffusion-limited cluster-cluster aggregation on a cubic lattice. Two steps compose the sintering process model: a "dressing" step in which all particles are replaced by overlapping larger particles and a "contraction" step in which an adequate length rescaling is performed in order to conserve the total mass. Several quantities are computed during sintering as a function of the aerogel density such as the two characteristic cut-off lengths (lower and upper limits of the fractal regime) and the specific interface area. Comparison is made with results of similar off-lattice calculations when available. Some of the numerical results are compared with experiments on partially densified base-catalysed aerogels. (17 Refs)

Subfile: A

Descriptors: aggregation; ceramics; densification; digital simulation; fractals; gels; numerical analysis; porous materials; silicon compounds; sintering

Identifiers: overlapping larger particles; numerical simulations; SiO/sub 2/ aerogels; scaling theories; computer generated gel structures; diffusion-limited cluster-cluster aggregation; cubic lattice; sintering process model; dressing step; contraction step; adequate length rescaling; total mass; aerogel density; characteristic cut-off lengths; fractal regime; specific interface area; off-lattice calculations; partially densified base-catalysed aerogels; SiO/sub 2/

Class Codes: A8120L (Preparation of ceramics and refractories); A8270G (Gels and sols); A8120E (Powder techniques, compaction and sintering); A0555 (Fractals); A0260 (Numerical approximation and analysis)

Chemical Indexing:

SiO2 bin - O2 bin - Si bin - O bin (Elements - 2)

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15/5/7 (Item 7 from file: 2)

DIALOG(R)File 2:INSPEC

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06072078 INSPEC Abstract Number: A9521-0550-040

Title: Numerical simulations of aerogel sintering

Author(s): Olivi-Tran, N.; Jullien, R.

Author Affiliation: Lab. de Sci. des Materiaux Vitreux, Montpellier II Univ., France

Journal: Physical Review B (Condensed Matter) vol.52, no.1 p.258-67

Publication Date: 1 July 1995 Country of Publication: USA

CODEN: PRBMDO ISSN: 0163-1829

U.S. Copyright Clearance Center Code: 0163-1829/95/52(1)/258(10)/\$06.00

Language: English Document Type: Journal Paper (JP)

Treatment: Theoretical (T)

Abstract: Following recent theoretical scaling ideas, numerical simulations for sintering of silica aerogels are performed starting from computer-generated structures obtained by diffusion-limited cluster-cluster aggregation on a cubic lattice. The sintering process is modeled in two steps: a 'dressing' step in which all particles are replaced by overlapping larger particles and a 'contraction' step in which an adequate length rescaling is performed in order to conserve the total mass. Several quantities are computed during sintering as a function of the aerogel density such as the two characteristic cutoff lengths (lower and upper limits of the fractal regime), the specific interface area and the small angle scattering intensity curve. Moreover the percolation transition between open and closed pores which occurs at a given stage of sintering is investigated. Comparison is made with results of similar off-lattice



calculations when available. Some of the numerical results are compared with experiments on partially densified base-catalysed aerogels. (22 Refs)

Subfile: A

Descriptors: aggregation; disperse systems; fractals; percolation; porous materials; silicon compounds; sintering

Identifiers: sintering; numerical simulations; silica aerogels; computer-generated structures; diffusion-limited cluster-cluster aggregation; cubic lattice; aerogel density; fractal regime; specific interface area; small angle scattering intensity curve; percolation transition; SiO/sub 2/

Class Codes: A0550 (Lattice theory and statistics; Ising problems); A8120E (Powder techniques, compaction and sintering); A0560 (Transport processes: theory)

Chemical Indexing:

SiO2 bin - O2 bin - Si bin - O bin (Elements - 2)

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15/5/8 (Item 8 from file: 2)

DIALOG(R) File 2:INSPEC

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05826386 INSPEC Abstract Number: C9501-1290F-012

**Title:** Coordinated replenishment systems with discount opportunities

**Author(s):** van der Duyn Schouten, F.A.; van Eijs, M.J.G.; Heuts, R.M.J.

**Author Affiliation:** Centre for Econ. Res., Tilburg Univ., Netherlands

**Journal:** International Journal of Production Research vol.32, no.12

p.2879-95

**Publication Date:** Dec. 1994 **Country of Publication:** UK

**CODEN:** IJPRB8 **ISSN:** 0020-7543

**U.S. Copyright Clearance Center Code:** 0020-7543/94/\$10.00

**Language:** English **Document Type:** Journal Paper (JP)

**Treatment:** Theoretical (T)

**Abstract:** In many practical situations, coordination of **replenishment** orders for a family of items can lead to considerable cost savings. A well-known class of strategies for the case where cost savings are due to reduced joint ordering costs is the class of can-order strategies. However, these strategies, which are simple to implement in practice, do not take discount possibilities into account. We propose a method to incorporate discounts in the framework of can-order strategies. A continuous review multi-item inventory system is considered with independent compound Poisson demand processes for each of the individual items. Discounts are offered by the supplier as a percentage of the **total dollar value** whenever this **value** exceeds a given threshold. Starting from the can- **order** strategy as a basic decision rule, we develop a simple heuristic to evaluate these discount opportunities. The performance of the can-order strategy with discount evaluation is compared with that of another class of discount evaluation rules as proposed by Miltenburg and Silver. (24 Refs)

Subfile: C

Descriptors: cost-benefit analysis; optimisation; random processes; stock control

Identifiers: coordinated **replenishment** systems; discount opportunities; **replenishment** orders; cost savings; can-order strategy; continuous review multiple item inventory system; compound Poisson demand processes; heuristic; discount evaluation

Class Codes: C1290F (Systems theory applications in industry); C1180 (Optimisation techniques); C1140Z (Other topics in statistics)

15/5/9 (Item 9 from file: 2)

DIALOG(R) File 2:INSPEC

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05438522

**Title:** Danes and Americans buy in to cash cards

**Author(s):** Schuler, J.F.

**Author Affiliation:** Schuler Consultancy, Gaithersburg, MD, USA

**Journal:** ID Systems European Edition vol.1, no.1 p.12-13, 15, 18

**Publication Date:** Spring 1993 **Country of Publication:** USA

**Language:** English **Document Type:** Journal Paper (JP)

**Treatment:** Practical (P)

**Abstract:** For Money Access Service Inc. (MAC) customers in the United States and DANMONT A/S customers in Denmark, currency and coins will be **replaced** by smart cards with a stored-value feature. Consumers will be able to load value into a secure computer microchip embedded in their cards using **automatic** teller machines and cash-to-card machines. These cards can then be used, instead of cash, at designated point-of-service locations, including pay phones, **vending machines**, transit stations, parking meters, laundromats, and stores where cash is commonly used. (0 Refs)

**Subfile:** D

**Descriptors:** point of sale systems; smart cards

**Identifiers:** Money Access Service; United States; DANMONT; Denmark; smart cards; stored-value

**Class Codes:** D2140 (Marketing, retailing and distribution); D2050E (Banking)

15/5/10 (Item 10 from file: 2)

DIALOG(R) File 2:INSPEC

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05334985 INSPEC Abstract Number: C9303-5540B-002

**Title:** Touch screen replaces keys and information panels

**Author(s):** Riolo, F.

**Journal:** Tec - Ascom Technical Magazine no.1 p.9-12

**Publication Date:** 1992 **Country of Publication:** Switzerland

**ISSN:** 1015-5473

**Language:** English **Document Type:** Journal Paper (JP)

**Treatment:** Practical (P)

**Abstract:** Complex tariff zones and price levels are placing increasing demands on **automated** ticket **vending machines**. It is already clear that the new generation will no longer be equipped with a keypad or keyboard, but rather a touch screen. These new **automats** will not only issue tickets but will provide a wide range of necessary and useful information for the traveller. The preferred technology for these touch screens is an infrared grid. Design criteria for screen layout are presented. Three types of picture, which fulfil different functions, can be generated on the screen: computer graphics, fixed images and video clips. These picture types will **replace** ticket clerks. (0 Refs)

**Subfile:** C

**Descriptors:** point of sale systems; touch sensitive screens; travel industry; user interfaces

**Identifiers:** **automated** ticket **vending machines**; touch screen; infrared grid; screen layout; computer graphics; fixed images; video clips; picture types

**Class Codes:** C5540B (Interactive-input devices); C7185 (Other service industries); C6180 (User interfaces)

15/5/11 (Item 11 from file: 2)

DIALOG(R)File 2:INSPEC

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05271631 INSPEC Abstract Number: C9212-1290F-032

**Title: Coordinated replenishments from a common supplier**

Author(s): Russell, R.M.; Krajewski, L.J.

Author Affiliation: Coll. of Bus. Adm., Univ. of South Carolina, Columbia, SC, USA

Journal: Decision Sciences vol.23, no.3 p.610-32

Publication Date: May-June 1992 Country of Publication: USA

CODEN: DESCDQ ISSN: 0011-7315

Language: English Document Type: Journal Paper (JP)

Treatment: Theoretical (T)

**Abstract:** Presents a mathematical model and a heuristic solution procedure that provide analytical support to the buyer seeking to minimize **total costs of replenishing multiple items** from a common supplier. The relevant costs are purchase prices, **ordering costs**, holding costs, and transportation costs. Coordinated **replenishment** provides nearly a 30 percent reduction in controllable costs relative to independent control. Experimentation with the heuristic has yielded optimal solutions over 88 percent of the time. When optimality was not obtained, the mean penalty was much less than one percent. The average heuristic search was more than two orders of magnitude faster than branch and bound, even for small problems and possessed a much tighter distribution around the mean search time. (29 Refs)

Subfile: C

Descriptors: optimisation; search problems; stock control

Identifiers: stock control; optimisation; coordinated **replenishment**; common supplier; heuristic solution procedure; analytical support; buyer; purchase prices; ordering costs; holding costs; transportation costs; mean penalty; average heuristic search

Class Codes: C1290F (Industry); C1180 (Optimisation techniques)

15/5/12 (Item 12 from file: 2)

DIALOG(R)File 2:INSPEC

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04591348 INSPEC Abstract Number: C90024870

**Title: An EOQ model for items with stock dependent consumption rate and exponential decay**

Author(s): Padmanabhan, G.; Vrat, P.

Author Affiliation: Dept. of Mech. Eng., Indian Inst. of Technol., New Delhi, India

Journal: Engineering Costs and Production Economics vol.18, no.3 p. 241-6

Publication Date: Jan. 1990 Country of Publication: Netherlands

CODEN: ECPEDX ISSN: 0167-188X

U.S. Copyright Clearance Center Code: 0167-188X/90/\$03.50

Language: English Document Type: Journal Paper (JP)

Treatment: Theoretical (T)

**Abstract:** An inventory model is developed for initial stock dependent consumption rate and exponential decay items, considering cost of the material lost due to deterioration in addition to ordering cost, carrying cost and material cost. Infinite **replenishment** rate is assumed and backlogging is not permitted. An expression for optimum ordering quantity has been obtained. The model is illustrated with a numerical example and the effects of various parameters on economic **ordering quantity** and **total system cost** have been analysed through sensitivity analysis. (4 Refs)

Subfile: C  
Descriptors: optimisation; stock control  
Identifiers: stock control; optimisation; EOQ model; stock dependent consumption rate; exponential decay; deterioration; ordering cost; carrying cost; material cost; optimum ordering quantity; economic ordering quantity; total system cost; sensitivity analysis  
Class Codes: C1290F (Industry); C1180 (Optimisation techniques)

15/5/13 (Item 13 from file: 2)  
DIALOG(R) File 2:INSPEC  
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03889294 INSPEC Abstract Number: C87035405  
**Title: New type ticket vending machine**  
Author(s): Kawai, H.  
Journal: Shinko Electric Journal vol.31, no.1 p.47-9  
Publication Date: 1986 Country of Publication: Japan  
CODEN: SHDED7 ISSN: 0386-4146  
Language: Japanese Document Type: Journal Paper (JP)  
Treatment: Applications (A); New Developments (N); Practical (P)  
Abstract: NTT has developed a highly functional vending machine for improvement of service efficiency at stations. This vending machine developed to meet diversified needs and aimed at unmanned operation is characterized by reduction of frame weight, and information display with high degree of freedom using the plasma display. Passengers' operations can be simplified utilizing automatic information services by speech synthesis. The fluorescent lamp is used only for the destination indicator, and LED is used for all other lighting, which saves lamp replacement. (0 Refs)

Subfile: C  
Descriptors: point of sale systems; railways  
Identifiers: railway stations; ticket vending machine ; NTT; unmanned operation; frame weight; plasma display; automatic information services; speech synthesis; fluorescent lamp; LED  
Class Codes: C7185 (Other service industries)

15/5/14 (Item 14 from file: 2)  
DIALOG(R) File 2:INSPEC  
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03060232 INSPEC Abstract Number: A83064456  
**Title: Stellar coronae: What can be predicted with minimum flux models?**  
Author(s): Hammer, R.; Endler, F.; Ulmschneider, P.  
Author Affiliation: Joint Inst. for Lab. Astrophys., Univ. of Colorado, Boulder, CO, USA  
Journal: Astronomy and Astrophysics vol.120, no.1, pt.1 p.141-6  
Publication Date: April 1983 Country of Publication: West Germany  
CODEN: AAEJAF ISSN: 0004-6361  
Language: English Document Type: Journal Paper (JP)  
Treatment: Theoretical (T)  
Abstract: To determine the possible errors of various minimum flux corona (MFC) predictions, the authors compare MFC models with a grid of detailed coronal models that covers a range of two orders of magnitude in both the total amount  $\phi$  /sub M0/ of coronal heating and the characteristic damping length L. For given  $\phi$  /sub M0/, the pressure at the base of the transition region has a maximum as a function of L. This maximum possible pressure is the only quantity that can be predicted with sufficient accuracy by the MFC concept. MFC predictions of the mass loss rate and of

the energy losses due to stellar wind can be wrong by many orders of magnitude. The unreliable MFC formulae should be replaced by a grid of detailed models which account for the coronal dependence on L. (38 Refs)

Subfile: A

Descriptors: stellar atmospheres; stellar models; stellar winds

Identifiers: stellar coronae; stellar atmospheres; minimum flux models; minimum flux corona; coronal models; coronal heating; characteristic damping length; pressure; transition region; mass loss rate; energy losses; stellar wind

Class Codes: A9710E (Stellar atmospheres, radiative transfer, opacity, and line formation); A9710H (Mass transfer)

15/5/15 (Item 15 from file: 2)

DIALOG(R)File 2:INSPEC

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02881111 INSPEC Abstract Number: B82037669, C82028207

**Title: Two calculator programs expedite front-end design**

Author(s): Hauer, F.W.

Author Affiliation: EDMAC Associates Inc., East Rochester, NY, USA

Journal: Microwaves vol.20, no.12 p.81-4, 86, 88

Publication Date: Nov. 1981 Country of Publication: USA

CODEN: MCRWAR ISSN: 0026-2919

Language: English Document Type: Journal Paper (JP)

Treatment: Theoretical (T)

Abstract: The HP-97 programs presented simplify receiver front-end design, including those using thin-film, modular components. The first program replaces the nomographs used to convert between noise figure (NF) and sensitivity. It also provides conversions from the third-order intercept point to the intermodulation level. The second program gives the total cascaded values for the third-order intercept point, gain, and NF for the receiver. It is intended for use after the overall receiver parameters have been defined by Program 1. Program 2 also includes a determination of the required intercept point based upon the intermodulation level. The actual intermodulation level can be calculated at any point in the cascade, and the cascaded totals can be stored to work from left to right, or from right to left, through the block diagram. (6 Refs)

Subfile: B C

Descriptors: circuit CAD; complete computer programs; electronic calculators; radio receivers

Identifiers: noise figure sensitivity; third order intermodulation; radio receivers; circuit CAD; calculator programs; front-end design; noise figure; sensitivity; gain; intermodulation level

Class Codes: B1130B (Computer-aided circuit analysis and design); B6420D (Radio and television receivers); C5420 (Mainframes and minicomputers); C7410D (Electronic engineering)

15/5/16 (Item 16 from file: 2)

DIALOG(R)File 2:INSPEC

(c) 2005 Institution of Electrical Engineers. All rts. reserv.

02680652 INSPEC Abstract Number: B81023538

**Title: Uses of solid state relays expected to expand in future**

Author(s): Takahashi, T.

Journal: JEE (Journal of Electronic Engineering) vol.17, no.168 p. 32-6

Publication Date: Dec. 1980 Country of Publication: Japan

CODEN: JEENDL ISSN: 0385-4507

Language: English Document Type: Journal Paper (JP)

Treatment: Applications (A); General, Review (G); Practical (P)

Abstract: In recent years, there has been growing demand for solid state relays (SSRs) in the market. Because of their advantages of high reliability, long service life, and low noise, they are increasingly replacing conventional electromagnetic contactors and relays. As in the United States, various kinds of solid state relays have been introduced in Japan, and their applications have been expanded from general-purpose power switches, to traffic signals, numerical control machine tools, thermostatic baths, automatic vending machines, business machines, computer terminals, and microcomputer-controlled I/O equipment. In the future, the costs of SSRs will be lowered through the integration of control circuits into single-chip circuits, and SSRs will come to have not only switching functions but also various other functions. (0 Refs)

Subfile: B

Descriptors: semiconductor relays

Identifiers: solid state relays; reliability; service life; noise; control circuits; single-chip circuits; semiconductor relays

Class Codes: B2180B (Relays and switches)

15/5/17 (Item 17 from file: 2)

DIALOG(R) File 2:INSPEC

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02046392 INSPEC Abstract Number: C77013130

Title: Empirical comparison of partitioned and non-partitioned buffer management in virtual memory systems

Author(s): Brice, R.S.; Sherman, S.W.

Author Affiliation: George Washington Univ., Hampton, VA, USA

Conference Title: Computer Performance Evaluation p.1-15

Publisher: Online, Uxbridge, Middx., UK

Publication Date: 1976 Country of Publication: UK xv+590 pp.

Conference Date: Sept. 1976 Conference Location: London, UK

Language: English Document Type: Conference Paper (PA)

Treatment: Experimental (X)

Abstract: Buffer pools are created and managed in data base systems in order to reduce the total amount of accesses to secondary memory. In systems using virtual memory the virtual buffer pools can increase secondary memory accesses by increasing paging in the system. This paper compares the performance of systems where the virtual buffer is allocated fixed amounts of real storage and partitioned from the program with the performance of systems where the virtual buffer and program compete for real memory. The analysis utilises empirical data gathered in a multifactor experiment. The factors considered are memory size, virtual buffer size, virtual page replacement algorithm, buffer management algorithm and size of real memory allocated to the virtual buffer. (11 Refs)

Subfile: C

Descriptors: storage management; virtual storage

Identifiers: virtual memory; virtual buffer pools; paging; performance; real memory; multifactor experiment; memory size; virtual buffer size; virtual page replacement algorithm; buffer management algorithm

Class Codes: C6120 (File organisation)

15/5/18 (Item 18 from file: 2)

DIALOG(R) File 2:INSPEC

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01447018 INSPEC Abstract Number: C72023966

**Title:** An approach for evaluating interactions in a multi-product total cost inventory model

**Author(s):** Saxton, G.F.

**University:** Arizona State Univ., Tempe, AZ, USA

**Dissertation Date:** 1972

**Country of Publication:** USA 254 pp.

**Availability:** Univ. Microfilms, Ann Arbor, MI, USA Order No. 72-13015

**Language:** English **Document Type:** Dissertation (DS)

**Treatment:** Economic aspects (E)

**Abstract:** The objective of the study was to develop an analytic method for determining an optimum cost policy as a function of the **order quantity** for a **total cost**, multi-product inventory model where demands were known with certainty. A computer simulation was also developed in order to verify certain input parameters as well as the resultant system cost as predicted by the analytic model. The objective function was the sum of shortage, **replenishment**, carrying, obsolescence, area bin, manpower, and equipment costs. The model was intended to be predictive in nature, and as such, no constraints were placed on any of the system parameters.

**Subfile:** C

**Descriptors:** distributive administrative data processing; financial administrative data processing; modelling; stock control

**Identifiers:** optimum cost policy; order quantity; computer simulation; multiproduct total cost inventory model

**Class Codes:** C7120 (Finance); C7160 (Manufacturing and industry)

15/5/19 (Item 19 from file: 2)

DIALOG(R)File 2:INSPEC

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01396691 INSPEC Abstract Number: C72013371

**Title:** Now- automated case picking for thousands of items

**Journal:** Modern Materials Handling vol.27, no.2 p.44-8

**Publication Date:** Feb. 1972 **Country of Publication:** USA

**CODEN:** MMHHA2 **ISSN:** 0026-8038

**Language:** English **Document Type:** Journal Paper (JP)

**Treatment:** Applications (A); Practical (P)

**Abstract:** The order picking and delivery system described here works like a huge **vending machine** to dispense about 18000 cases per shift. A computer selects and releases cases from 4200 gravity-storage lanes and even schedules the **re - stocking** of the system.

**Subfile:** C

**Descriptors:** control engineering applications of computers; materials handling

**Identifiers:** **automated** case picking; order; delivery system; computer; schedules; gravity storage; **re - stocking**

**Class Codes:** C3320 (Materials handling); C7420 (Control engineering)

15/5/20 (Item 20 from file: 2)

DIALOG(R)File 2:INSPEC

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0000518805 INSPEC Abstract Number: 1960A06983

**Title:** On the Boussinesq approximation for a compressible fluid

**Author(s):** Spiegel, E.A.; Veronis, G.

**Journal:** Astrophysical Journal 131 2 p.442-447

**Publication Date:** March 1960 **Country of Publication:** USA

**Language:** English **Document Type:** Journal Paper (JP)

**Abstract:** The full, non-linear equations governing thermal convection in

a compressible fluid have been re-examined in order to determine the conditions under which the Boussinesq approximation is applicable. These conditions are (a) the vertical dimension of the fluid is much less than any scale height, and (b) the motion-induced fluctuations in density and pressure do not exceed, in order of magnitude, the total static variations of these quantities. Under these conditions the equations are formally equivalent to those for an incompressible system when the temperature gradient is replaced by its excess over the adiabatic and  $C_{SUB p}$  replaces  $C_{SUB v}$ .

Subfile: A

Descriptors: convection; fluids

Identifiers: convection; fluids

Class Codes: A4400 (Heat flow, thermal and thermodynamic processes)

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15/5/21 (Item 1 from file: 35)

DIALOG(R) File 35:Dissertation Abs Online

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01688059 ORDER NO: NOT AVAILABLE FROM UNIVERSITY MICROFILMS INT'L.  
**SPARE PART MANAGEMENT OF AN ELECTRICITY DISTRIBUTION NETWORK (FAULT  
MANAGEMENT)**

Author: LAURONEN, JARI AHTI TAPIO

Degree: DR.TECH.

Year: 1998

Corporate Source/Institution: LAPPEENRANNAN TEKNILLINEN KORKEAKOULU  
(FINLAND) (5755)

Source: VOLUME 60/02-C OF DISSERTATION ABSTRACTS INTERNATIONAL.  
PAGE 474. 130 PAGES

Descriptors: ENGINEERING, ELECTRONICS AND ELECTRICAL

Descriptor Codes: 0544

ISBN: 951-764-273-3

Publisher: LAPPEENRANTA UNIVERSITY OF TECHNOLOGY, P.O. BOX 20,  
FIN-53857 LAPPEENRANTA, FINLAND

Electricity distribution companies are required to improve their operational cost-effectiveness. The storage systems of the companies have traditionally been based on the "adequate" number of stores with plenty of different components. Therefore, they are potential objects for cost reduction.

The effective operation of spare part management of an electricity distribution network requires that the spare components can be delivered at the fault site quickly in order to avoid excessive outage costs. In a fault situation the stores form a net structure. Currently the rural electricity distribution companies lack suitable methods for designing a spare part storage system. This thesis presents a suitable method for the designing problem.

The models assume that faults of a distribution network are stochastic. Therefore, they are best suited for component types installed in large quantities.

Improved methods for defining the outage, material and total costs for perpetual order - quantity and periodic order -up-to-level storage control systems are described. The method for determining the control parameters of the stores is also presented and ways for finding the necessary initial parameter values are introduced.

The developed method is tested in Hameen Sahko Oy (HSOY). The results of the calculations are given.

The key findings are: (1) Small differences in the designing results can increase costs remarkably. For example, in HSOY too low stock levels



can result in even eight folds higher outage costs than in the proper design. (2) The best number of stores is not the same for all component types. For example, in HSOY the best number of stores is seven for the 50 kVA transformers and one for the 315 kVA transformers in a summer. (3) If the stock levels are increased the protection against the demand variations is better the shorter the duration of the review period and/or the **replenishment** lead time is.

15/5/22 (Item 2 from file: 35)  
DIALOG(R) File 35:Dissertation Abs Online  
(c) 2005 ProQuest Info&Learning. All rts. reserv.

01261369 ORDER NO: AAD93-02345  
**CUSTOMER ORDER RESPONSE TIMES IN MULTI-ITEM INVENTORY SYSTEMS**  
Author: ZHANG, XIN ALEX  
Degree: PH.D.  
Year: 1992  
Corporate Source/Institution: STANFORD UNIVERSITY (0212)  
Advisers: HAU L. LEE; WARREN H. HAUSMAN  
Source: VOLUME 53/09-B OF DISSERTATION ABSTRACTS INTERNATIONAL.  
PAGE 4882. 128 PAGES  
Descriptors: ENGINEERING, INDUSTRIAL  
Descriptor Codes: 0546

Inventory research has generally focused on single end-item or independent item systems with total cost or immediate fill-rate as performance measures, while ignoring the responsiveness of the system in regard to complex multi-item customer orders. We consider customer order response times in multi-item inventory systems in which a customer **order** may involve multiple items with varying amounts of each **item**; the **cumulative orders** for the **items** may be correlated in a given period but are independent over time.

First we present a modeling framework for multi-item system response time under periodic review, under which we analyze a performance evaluation model with deterministic **replenishment** leadtimes and separate order-order-up policies based on the inventory position of each item. Assuming multivariate normally distributed demands, we show that the inventory levels are also multinormal; thus the system response time distribution can be expressed through a multinormal distribution. This model is further extended to systems with stochastic **replenishment** leadtimes, and an approximation scheme is proposed to aid numerical computation of response time distributions.

Using the performance evaluation model, we next study the optimization problem of maximizing the probability of meeting customer orders within a pre-specified time window under a linear budget, and discuss and evaluate a heuristic approach in which equal safety factors (equal fractiles) are specified for all items.

Finally we analyze customer order response times in a general multi-stage system and propose an echelon decomposition approach to compute the system response time distributions. The results from the echelon decomposition approach are then compared to those from exact analysis.

15/5/23 (Item 3 from file: 35)  
DIALOG(R) File 35:Dissertation Abs Online  
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1081143 ORDER NO: AAD89-25848  
**A DYNAMIC BIN REPLACEMENT /PACKING PROBLEM (DYNAMIC BIN PACKING)**

Author: COOK, JANN CLAUDIA  
Degree: PH.D.  
Year: 1989  
Corporate Source/Institution: STANFORD UNIVERSITY (0212)  
ADVISER: MARGARET BRANDEAU  
Source: VOLUME 50/07-B OF DISSERTATION ABSTRACTS INTERNATIONAL.  
PAGE 3131. 135 PAGES  
Descriptors: OPERATIONS RESEARCH  
Descriptor Codes: 0796

In this dissertation we study a project sequencing problem with an embedded bin packing problem which we call the dynamic bin **replacement** /packing problem. The problem consists of packing items into a set of bins which are changed over time. An initial configuration of bins is assumed and a final configuration is targeted. Some bins are to be **replaced** by new bins, while other bins are to be modified. The objective is to schedule the bin **replacements**, and pack the items into the available bins in **order** to minimize the **total** number of **item** moves over the horizon of the problem. The problem is a generalization of the standard project sequencing problem because schedules of events which affect the set of bins available also affect the feasibility of move sequences for items.

We show that the problem can be formulated as a binary integer program with hierarchical structure in the decision variables. We discuss several examples of applications which fit into this framework. We develop a heuristic for the problem using modified branch and bound, using preprocessing to allow us to effectively branch on bin **replacement** schedules. To bound, we consider nodes in the branch and bound tree where the schedule of events affecting bin availability is completely determined. We first quickly determine a cover lower bound for each bin **replacement** schedule, then we solve the Linear Programming (LP) relaxation for the resulting "dynamic bin packing problem". We use fractional resolution and cutting planes to eliminate fractionality in the LP optimal solution. We extend the heuristic to an optimal algorithm by branching on fractional variables. Computational results for the heuristic algorithm are presented. Finally, extensions and directions for future research are discussed.

15/5/24 (Item 4 from file: 35)  
DIALOG(R)File 35:Dissertation Abs Online  
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755811 ORDER NO: AAD81-19539  
**ELECTRONIC FUNDS TRANSFER SYSTEMS IN THE RETAIL INDUSTRIES: PAST, PRESENT, AND FUTURE**

Author: BITTER, CAROLE F.  
Degree: PH.D.  
Year: 1981  
Corporate Source/Institution: CORNELL UNIVERSITY (0058)  
Source: VOLUME 42/04-A OF DISSERTATION ABSTRACTS INTERNATIONAL.  
PAGE 1728. 437 PAGES  
Descriptors: ECONOMICS, AGRICULTURAL  
Descriptor Codes: 0503

EFTS, an acronym for **Electronic Funds Transfer Systems**, is a type of payment system. EFTS represents a total **electronic** mechanism for the instantaneous exchange of value between parties. **Electronic** data processing technology has been applied in order to eliminate myriad paper instruments that would normally be associated with monetary transfers. The mechanism includes plastic transaction cards, terminals, a communications **network** and the switching apparatus needed to route **electronic** messages

to the computers of involved financial institutions.

Financial institutions, governmental bodies, and retail, consumer-oriented industries, in a variety of unrelated experiments, have developed marketing tests of EFTS that are operational in several forms: (1) Direct deposit of payroll in the public and private sector. (2) Check authorization. (3) Check verification. (4) Check guarantee. (5) **Automated** teller machines. (6) **Automated** clearing houses. (7) Retail point-of-sale systems. (8) Bill paying via telephone. (9) Cash **dispensing units**. (10) **Automatic** transfer service accounts.

There is a multi-faceted, interdisciplinary relationship developing in the potential for the **electronic** transfer of funds among industries and EFTS must be justified, in addition to our present cash and check payment systems, in respect to trade-offs between benefits and opportunities on the one hand and costs and problems on the other hand.

The research describes the major consumer issues in EFTS development such as privacy, use of information, float, theft, error, system malfunction, and consumer redress. It profiles developmental aspects of EFTS such as the branch/terminal issue, inter-industry competition and cooperation, EFTS sharing, the impact of EFTS on credit, and it describes a cost analysis undertaken in order to investigate concerns that the development of EFTS would increase substantially the costs of payments transactions.

Similarities and differences in payments systems between the United States and foreign countries, the Giro Payment System, and international consumer services, **automated** clearing houses, cash dispensers, and **automated** teller machines are discussed.

Technological developments such as the competition among suppliers, market structure, policy alternatives, standards for EFTS, security in funds transfer, terminal security, communication security issues and consumer vulnerability are described. Issues that relate to the Federal Government and EFTS, such as EFTS and U.S. monetary policy, the payments system and the complex matter of government regulation and operation of **automated** clearing houses and point-of-sale switches are detailed.

The primary applications of EFTS-- **automated** clearing houses, **automated** teller machines, point-of-sale systems, and **automatic** telephone payment systems--are described in regard to background, costs, current status, existing problems and strategy considerations.

The research generates a complete and comprehensive description of EFTS in the retail industries. It describes the operational forms and services offered in scores of actual EFTS tests, ownership of the EFTS systems, and food industry characteristics such as market structure and the intricacies of price/non-price competition that encouraged EFT experimentation.

The innovative EFTS applications being tested in various retail operations permit formulation of useful generalizations about the advantages and disadvantages of these **networks** to the supermarket operator, to the consumer, and to the financial institution.

There is general agreement that the silent ebb and flow of electrons in computerized **electronic** funds transfer systems will soon begin to **replace** a large proportion of the billions of transactions now made annually by check. Retail point-of-sale transactions, due to supermarket check cashing volumes, will have great potential.

For functional efficiency, EFTS will have to be linked to **electronic** cash registers. The terminals, capable of point-of-sale scanning, will allow scanning and financial transactions to occur instantaneously as part of the consumer checkout function.

15/5/25 (Item 1 from file: 99)  
DIALOG(R)File 99:Wilson Appl. Sci & Tech Abs  
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1337489 H.W. WILSON RECORD NUMBER: BAST96030665  
**Micro PLCs and networks pace programmable controllers**  
Gyorki, John R;  
Machine Design v. 68 (May 9 '96) p. 73-7  
DOCUMENT TYPE: Feature Article ISSN: 0024-9114 LANGUAGE: English  
RECORD STATUS: Corrected or revised record

ABSTRACT: The increased popularity of medium, small, and micro programmable logic controllers (PLCs) is examined. Their increased usage is due, in part, to expanding input/output (I/O) points, increased processing capability, and the wider use of device **networks**. The bulk of the new applications, particularly for the micro PLCs, lies in single-task machines with a one-time setup, such as large appliances, **vending machines**, and sports and leisure equipment. The primary benefit is the cost, where as few as 2 relays can be economically **replaced** by one micro PLC. The Interbus-S distributed I/O **network** is an example of a PLC **network** that, although mainly used at low levels, is capable of passing messages and packets of data large enough to address electrical drives. The DeviceNet is an open **network** that interconnects such factory-floor devices as sensors, push buttons, motor starters, and drives to control systems. Information is provided about a range of common open buses and **networks**.

DESCRIPTORS: Numerical controllers--Miniaturization; **Network** interfaces;

15/5/26 (Item 2 from file: 99)  
DIALOG(R)File 99:Wilson Appl. Sci & Tech Abs  
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1217939 H.W. WILSON RECORD NUMBER: BAST95013396  
**New Micro PLC set to probe nontraditional application areas**  
Babb, Michael;  
Control Engineering v. 42 (Feb. '95) p. 56-7  
DOCUMENT TYPE: Feature Article ISSN: 0010-8049 LANGUAGE: English  
RECORD STATUS: New record

ABSTRACT: GE Fanuc will introduce its new Series 90 Micro programmable logic controller (PLC) at the International Control Engineering Exposition in Chicago. This new PLC measures only 4 1/2 [times] 3 [times] 3 1/4 inches and was designed for small process **automation** and for relay or custom **electronic** controller **replacement**. The use of flash memory means that users can upgrade the PLC operating system software without having to **replace** memory chips. The PLC has potential applications not only in traditional industrial areas such as machines, robots, packaging equipment, and material handling systems, but also in nontraditional PLC areas such as garbage trucks, **vending machines**, car wash systems, french fryers, and laundry and dry cleaning machines. The list price of the new PLC is \$240.

DESCRIPTORS: Numerical controllers--Miniaturization;

15/5/27 (Item 3 from file: 99)  
DIALOG(R)File 99:Wilson Appl. Sci & Tech Abs  
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1166385 H.W. WILSON RECORD NUMBER: BAST94034977

Automatic tool dispensing links material flow with information flow  
Modern Machine Shop v. 66 (May '94) p. 166+  
DOCUMENT TYPE: Feature Article ISSN: 0026-8003 LANGUAGE: English  
RECORD STATUS: New record

ABSTRACT: Vertex Technologies has introduced a unique **automatic tool vending machine** called the **Automatic Tool Dispenser (ATD)**. With the ATD, machinists can get drill bits, inserts, taps, and other perishable tooling items at the push of a button. The data from the machine's computers can be used to keep a minute-by-minute track of tool inventory. Ultimately, each ATD would be **electronically** connected to the tool supplier off-site. In this scenario, the tool supplier would assume responsibility for **restocking** the ATD.

DESCRIPTORS: **Automated** tool dispensers;

15/5/28 (Item 1 from file: 474)  
DIALOG(R)File 474:New York Times Abs  
(c) 2005 The New York Times. All rts. reserv.

07814696 NYT Sequence Number: 671762000611  
**ARTISTS PRO AND CON WITH A NEW GENERATION OF SWINDLES**  
Stamler, Bernard  
New York Times, Col. 3, Pg. 2, Sec. 14CY  
Sunday June 11 2000  
DOCUMENT TYPE: Newspaper JOURNAL CODE: NYT LANGUAGE: English  
RECORD TYPE: Abstract

ABSTRACT:  
Article on decline in traditional street scams in New York City, which are being **replaced** by new ones; self-proclaimed census workers elicit personal information by phone from unsuspecting victims and use it to obtain credit cards or make fraudulent purchases over **Internet**; thieves are using stolen credit cards to purchase transit system MetroCards from **vending machines** (M)

DESCRIPTORS: Population; Census; Frauds and Swindling; Transit Systems; Prices (Fares, Fees and Rates); Credit and Money Cards; Computers and the **Internet**; **Vending Machines**  
PERSONAL NAMES: Stamler, Bernard  
GEOGRAPHIC NAMES: New York City

15/5/29 (Item 2 from file: 474)  
DIALOG(R)File 474:New York Times Abs  
(c) 2005 The New York Times. All rts. reserv.

05776352 NYT Sequence Number: 009555900423  
**WHO PUTS BACK THE CASH IN THE CASH MACHINES' CACHES?**  
BARRON, JAMES  
New York Times, Col. 2, Pg. 1, Sec. B  
Monday April 23 1990  
DOCUMENT TYPE: Newspaper JOURNAL CODE: NYT LANGUAGE: English  
RECORD TYPE: Abstract

ABSTRACT:  
Article profiles Citibank's cash- **replenishment** teams--bank workers who **replenish**, on daily basis, bank's **automated** cash- **dispensing**

machines (M)

COMPANY NAMES: CITIBANK (NYC)  
DESCRIPTORS: BANKS AND BANKING; AUTOMATED TELLER MACHINES  
PERSONAL NAMES: BARRON, JAMES

15/5/30 (Item 3 from file: 474)  
DIALOG(R) File 474:New York Times Abs  
(c) 2005 The New York Times. All rts. reserv.

00757544 NYT Sequence Number: 028322770522  
(Beatrice Buckler, founding editor of Working Woman (pub), has resigned her position, ending fight for control of magazine between her and J Jay Frankel, financial promoter who helped start magazine in '76. Virtually all 17 staff members of magazine are expected to resign or be replaced in wake of resignation. Frankel had sought to oust Buckler on ground of mismanagement. Buckler has responded by accusing Frankel of breaching his own obligations and of illegally diverting some of magazine's funds into controversial investment of business groups controlled by, or associated with Frankel in state lottery ticket vending machine corp--Regent Assocs or Automated Ticket Mgt Corp. Some of these groups are under investigation by law enforcement agencies in aftermath of unsolved, gangland-style murder in Queens of Frankel lottery assoc, Arthur Migram, last Feb (M).)

FARBER, MYRON A  
New York Times, Col. 1, Pg. 31  
Sunday May 22 1977  
DOCUMENT TYPE: Newspaper JOURNAL CODE: NYT LANGUAGE: English  
RECORD TYPE: Abstract

COMPANY NAMES: AUTOMATED TICKET MANAGEMENT CORP; REGENT ASSOCIATES  
DESCRIPTORS: MAGAZINES; MURDERS AND ATTEMPTED MURDERS; SUSPENSIONS, DISMISSALS AND RESIGNATIONS  
PERSONAL NAMES: FARBER, MYRON A; BUCKLER, BEATRICE; FRANKEL, J JAY; MIGRAM, ARTHUR

15/5/31 (Item 4 from file: 474)  
DIALOG(R) File 474:New York Times Abs  
(c) 2005 The New York Times. All rts. reserv.

00654442 NYT Sequence Number: 116787750209  
(Major Swedish and French warplane mfrs are offering govts of Netherlands, Belgium, Norway and Denmark financial inducements to head off possible purchases of US fighter aircraft. Efforts to persuade nations to 'Buy European' and to reject Gen Dynamics F-16 lightweight fighter have been accompanied by warnings that purchase of plane will be serious and perhaps fatal blow to Eur aircraft indus. Assn of Eur Aerospace Mfrs pres Alan H C Greenwood warns Eur indus, comprising approximately 500,000 workers, is in danger of becoming subcontractor to US indus. Ger, French and Brit sources also have stressed that outcome of fighter sweepstakes, involving sale of 346 aircraft, will determine Eur's viability as major aircraft mfr for its own use and for export. SAAB-Scania Aircraft Co, which mfrs Viggen fighter, recently reptd that it would increase its compensatory inducements to industries in 4 NATO nations if they chose Viggen to replace aging and obsolete aircraft. Has said that aircraft and allied industries in Netherlands would be able to count on 15,800 man-yrs of work over 10-yr period if Viggen is chosen. Could, together

with Volvo Motors and Ericsson Electronics, guarantee indus program worth approximately \$926.9- million over next decade. SAAB-Scania also has informed Danish Govt that Swedish cos are prepared to place orders in Denmark to total value of 148% of cost of 58 fighters, Denmark's share of order. France's efforts to sell Mirage F-1-M53 have stressed willingness to me

MIDDLETON, DREW

New York Times, Col. 1, Pg. 8

Sunday February 9 1975

DOCUMENT TYPE: Newspaper JOURNAL CODE: NYT LANGUAGE: English

RECORD TYPE: Abstract

COMPANY NAMES: AEROSPACE MANUFACTURERS, ASSN OF EUROPEAN; AIR FORCE; ERICSSON ELECTRONICS; GENERAL DYNAMICS CORP; NORTH ATLANTIC TREATY ORGANIZATION (NATO); NORTHROP CORP; SAAB-SCANIA AB; VOLVO INC

DESCRIPTORS: ACCIDENTS AND SAFETY; ARMAMENT, DEFENSE AND MILITARY FORCES; ECONOMIC CONDITIONS AND TRENDS; F-104 AIRPLANE (STARFIGHTER); F-16 AIRPLANE; INTERNATIONAL RELATIONS; LABOR; MILITARY AIRCRAFT; MIRAGE F-1 AIRPLANE; UNEMPLOYMENT AND JOB MARKET; UNITED STATES ARMAMENT AND DEFENSE ; VIGGEN AIRPLANE; YF-17 AIRPLANE; AIRPLANES; AIRCRAFT INDUSTRY; AIRCRAFT PERSONAL NAMES: MIDDLETON, DREW; GREENWOOD, ALLEN (CHMN)

GEOGRAPHIC NAMES: BELGIUM; DENMARK; FRANCE; GREAT BRITAIN; NETHERLANDS; NORWAY; SWEDEN; UNITED STATES; WEST GERMANY

15/5/32 (Item 1 from file: 475)

DIALOG(R)File 475:Wall Street Journal Abs

(c) 2005 The New York Times. All rts. reserv.

06515035

**SOMEDAY, CARDS MAY MAKE COINS OBSOLETE**

Wall Street Journal, Col. 1, Pg. 8, Sec. B

Monday May 10 1993

DOCUMENT TYPE: Newspaper JOURNAL CODE: WSJ LANGUAGE: English

RECORD TYPE: Abstract

ABSTRACT:

Information Age column reports on growing interest in smart cards as a replacement for coins in vending machines , telephones and convenience stores; says cards work like an electronic purse that holds electronic cash, each time it is used the amount of the purchase is deducted by an electronic reader and when the purse is empty it can not be used anymore (M)

DESCRIPTORS: ELECTRONICS ; VENDING MACHINES ; NEW MODE LS, DESIGN AND PRODUCTS

15/5/33 (Item 1 from file: 583)

DIALOG(R)File 583:Gale Group Globalbase(TM)

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09364816

LA DISTRIBUTION AUTOMATIQUE /

FRANCE: RISE IN AUTOMATIC VENDING MACHINES

NZo Restauration (XNL) Sep 2000 p.38-40,42,44

Language: FRENCH

There were 532,907 automatic vending machines in France in 1999; 59% were big machines, making a turnover of FFr 7.8bn, up 10% from 1998.

Companies are the leading clients of automatic vending machines , representing 74% of the clients and 65% of the turnover. In companies which have several plants and in which people are working around the clock as in Renault and Peugeot, the automatic vending machines installed near the plants, and depending on the case, in a place where it is possible to eat the food on the spot, or have sacs in which to carry the food to one's work station. Some companies prefer to have a counter offering hot dishes served by someone (as in Sodexho's Relais Gourmand), and others prefer to have an automatic vending machine with a selection which is close to that of a canteen. The automatic vending machines also make it possible to offer food around the clock to hospital personnel, to clients of inexpensive hotel chains which offer water fountains, microwaves, and dishes in their rooms, and to theme parks. The Wagons-Lits are testing automatic vending machines in trains, particularly in the XTER regional express trains. The products offered vary according to the type of train and the length of the journey. On short drips, the automatic vending machines can replace the bar-restaurant. The next test will be on the TGV Atlantique high speed train; 105 trains will be equipped with automatic vending machines in 2001. The automatic vending machines may be a marketing tool for brands. In 1999, NestlZ Food-Services launched an automatic vending machine concept in hypermarkets, so that the customers could have a drink while shopping or try a new product.

PRODUCT: Vending Machines (3581); Food & Drink Vending Services (5962); Food & Drink (2000);  
 EVENT: Market & Industry News (60);  
 COUNTRY: France (4FRA);

15/5/34 (Item 2 from file: 583)  
 DIALOG(R) File 583:Gale Group Globalbase(TM)  
 (c) 2002 The Gale Group. All rts. reserv.

09328650  
 Utility costs on the rise in St. Kitts  
 ST. KITTS AND NEVIS: UTILITIES COST MORE NOW  
 Cana News (AWX) 19 Jul 2000 Online  
 Language: ENGLISH

The price of utilities in St. Kitts and Nevis will rise, affecting the costs of water supply, fuel, cooking gas, and electricity. Regular unleaded fuel prices are up to EC\$ 6.60 from EC\$ 5.70/gallon. Domestic water supply have been increased to EC\$ 2.50 (from EC\$ 1.20), while commercial rates are up to EC\$ 12.00 (from EC\$ 7.20). A 20-pound cylinder of cooking gas will now cost EC\$ 26 (EC\$ 24.50), and 100-pound unit will cost EC\$ 125 (from EC\$ 110). In order to buffer these higher prices, tax concessions valued at a total US\$ 666,000 (EC\$ 1.8mn) will be given for brake shoes, replacement buses, and tires. \*

PRODUCT: Oil Products (2911); Electric Utilities (4910); Water & Drainage Facilities Constr (1623WD); Water Supply Industry (4940);  
 EVENT: Commodity & Service Prices (72);  
 COUNTRY: St Kitts & Nevis (3STK);

15/5/35 (Item 3 from file: 583)  
 DIALOG(R) File 583:Gale Group Globalbase(TM)  
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09327332

MPs told euro will hit small retailers hardest

UK: SMALL RETAILERS HIT HARDEST BY EURO

Financial Times (FT) 19 Jul 2000 p.10

Language: ENGLISH

Small retailers would face costs as high as 5% of turnover if the UK makes the transition from sterling to the European single currency. A cross party trade and industry committee heard from Peter Williams, financial director of Selfridges. He said costs for smaller shops would be two and half times higher than bigger stores due to a lack of economies of scale. The costs would also depend on the speed of withdrawal from sterling, flexibility of legislation and the government's information campaign. The Automatic Vending Association representing refreshment machines say entering the euro could cost them Gbt 1bn a year. It argues that it would be unfair to expect the industry pay for the burden of reprogramming or **replacing** machines with no benefit for them.

(c) Financial Times 2000

PRODUCT: Small Business (9970); **Vending Machines** (3581); Food & Drink Vending Services (5962); Retail Trade (5200);

EVENT: Company Reports & Accounts (83);

COUNTRY: United Kingdom (4UK);

15/5/36 (Item 4 from file: 583)

DIALOG(R)File 583:Gale Group Globalbase(TM)

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09204598

Branson returns to bid for the lottery

UK: LOTTERY COMPETITION MOVE REVEALED

The Times (TS) 01 Dec 1999 p. 1

Language: ENGLISH

The Lottery Commission has decided promote fresh competition for the UK's National Lottery by demanding the disposal of 35,000 computerised ticket terminals. The move will force Camelot to **replace** terminals **valued** at Gbt 100mn in **total** in **order** to hold on to its licence in mid-2000 and is expected to result in a fresh battle between the current lottery operator and Virgin Group boss, Richard Branson. The Lottery Commission's decision was made as concern emerged that Camelot would not face a major challenge to its role and is also expected to result in a further Gbt 100mn deal for equipment supplier, GTech.

COMPANY: GTECH; VIRGIN GROUP; CAMELOT; LOTTERY COMMISSION

EVENT: National Government Economics (94);

COUNTRY: United Kingdom (4UK);

15/5/37 (Item 5 from file: 583)

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09025815

Keep the change

US: DEVELOPMENT OF USES FOR SMART CARDS

Economist (ET) 21 Nov 1998 p.99

Language: ENGLISH

The great hope for smart cards was that they would enable people to **replace** cash with value stored on the memory of the card. However, trials of such a use have ended without capturing the public's enthusiasm. There does seem to be a demand for smart cards, as a survey conducted by the Smart Card Forum discovered. It surveyed 2,400 North Americans and three quarters said they were interested in having a smart card. However, the uses for the card that people were interested in were for storing medical and car-related information. Even in countries where smart cards are actually used for cash, for instance Belgium and Finland, they are mostly used for **vending machines**, parking meters, pay telephones and washing machines. Smart card companies are to experiment with versatile versions of cash carrying cards. One proposal is for a combined cash smart card and debit card. Swiped one way by a store will debit the customers bank account and swiped the other will deduct from the value stored on the card. Another idea is to combine smart cards with store loyalty schemes. They could **automatically** count up purchases that contribute towards offers. Some analysts see an ownership problem with such uses. The card and the chip would remain the property of the bank but if the chip also stored information on the purchases made by the holder as well as their medical history and driving record should the bank be allowed access to such information..

COMPANY: SMART CARD FORUM

PRODUCT: Debit Card Svcs (6020DC); Nonbank Credit Card Firms (6141); Smart Cards (3078SC);

EVENT: Product Design & Development (33); Sales & Consumption (65);

COUNTRY: United States (1USA);

15/5/38 (Item 6 from file: 583)

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09011088

Sema launches AVANTIX

UK: SEMA LAUNCHES AVANTIX **VENDING MACHINE**

Railway Gazette International (ZCH) Nov 1998 p.775

Language: ENGLISH

Sema Group has announced that it has launched the AVANTIX range of **vending machines**. The range of machines runs on a Windows NT operating platform and has Pentium processors. The machine, named ProStation, has been designed to **replace** 500 APTIS ticket office machines as well as 1,000 Quickfare self-service units. The **automated** system was designed by Sema and Cubic Transportation Systems, and is currently being trialled in the UK at Nottingham. The cards can be bought using credit cards as the machine has full printing capabilities and can also offer timetable information. The MultiTicket self-service machine has been developed with Ascom and will be used as a **replacement** for Quickfare. The first machine will be installed by Connex South Central in East Croydon. The final machine is the FastFare, and has been developed by CTS. It is capable of offering 10 fares via a colour touch-screen display and can also accept credit and debit cards. All of the machines can send fault messages to a central help-desk facility.

COMPANY: CUBIC TRANSPORTATION SYSTEMS; SEMA GROUP; ASCOM; CTS; CONNEX SOUTH CENTRAL

PRODUCT: **Vending Machines** (3581); Food & Drink Vending Services (5962);

EVENT: General Management Services (26); Product Design & Development (33);  
COUNTRY: United Kingdom (4UK);

15/5/39 (Item 7 from file: 583)  
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06699716  
New Distribution Systems sort une version revue et amZliorZe du Shop\  
BELGIUM: A NEW VERSION OF SHOP 24  
L'Echo (EB) 8 Oct 1998 p.8  
Language: FRENCH

In Belgium, the Shop 24 **automated** retail shop which was introduced by the New Distribution Systems (NDS) company in 1997, and it is now undergoing a renovation of its computer and mechanical systems. Since it was launched, the system has run into several snags: the **vending machines** are sensitive to vibrations and humidity, and there have been mechanical problems. Of 72 shops which have already been opened, 43 will be **replaced** by the new version which has a 99% reliability ratio. The NDS order book still has 48 units to be installed. The problems encountered with the former Shop 24 models will bring the NDS turnover down from BFr 168lmn in 1997 to BFr 75mn in 1998. Shop 24 is soon to issue US\$ 5mn worth of bonds with stock purchase warrants, in order to finance the investments it has made in order to develop the new version of Shop 24.

COMPANY: NDS; NEW DISTRIBUTION SYSTEMS  
PRODUCT: **Vending Machines** (3581); Food & Drink Vending Services (5962); Food Retailing (5400);  
EVENT: Product Design & Development (33); Debt & Equity Securities (81);  
COUNTRY: Belgium (4BEL);

15/5/40 (Item 8 from file: 583)  
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06678276  
Fusion zwischen Lekkerland und tobaccoland jetzt perfekt  
GERMANY: MERGER OF TOBACCOLAND, LEKKERLAND  
Die Tabak Zeitung (TZ) 28 Aug 1998 p.1  
Language: GERMAN

The two German convenience wholesalers Lekkerland Deutschland and Tobaccoland Gro handelsgesellschaft mbH & Co KG, subsidiary of Austria Tabak AG, are to merge into Lekkerland & Tobaccoland GmbH & Co KG (L & T) in Frechen, Germany on 1 January 1999, if the cartel authorities agree. The new group is to have 4,000 employees and a turnover of more than DM 9bn. According to the partners, the primary goal of the merger is the **replenishment** of product ranges, services and know-how. With a 25.1% stake, Austria Tabak will be the largest shareholder of the new company. The rest will be held by the about 100 small shareholders of Lekkerland. Business with **vending machines** is to be taken on by the new company Tobaccoland **Automatengesellschaft** mbH & Co KG. By operating about 190,000 machines, the firm is to generate a turnover of DM 1.9bn. L & T and Tobaccoland **Automatengesellschaft** are planning to concentrate purchasing of tobacco products in a purchasing subsidiary of Austria Tabak. Lekkerland Europa Holding with foreign activities in the Benelux countries, Austria,

Switzerland, Denmark, Spain, Hungary and the Czech Republic will not be included in L & T.

COMPANY: LEKKERLAND EUROPA HOLDING; TOBACCOLAND **AUTOMATENGESELLSCHAFT** ;  
LEKKERLAND & TOBACCOLAND; AUSTRIA TABAK; TOBACCOLAND  
GROSSHANDELSGESELLSCHAFT; LEKKERLAND DEUTSCHLAND

PRODUCT: Tobacco Products (2100);  
EVENT: Acquisitions & Mergers (15);  
COUNTRY: Austria (5AUT); Germany (4GER);

15/5/41 (Item 9 from file: 583)  
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06650677  
L'angoisse des machines \ piYces  
FRANCE: **VENDING MACHINES** TO SHIFT TO EURO  
Le Revenu FranXais (AGV) 12 Jun 1998 p.56  
Language: FRENCH

There are interesting take over opportunities in the **vending machine** market in France as an increasing number of **networks** of such machines are being sold given the cost of shifting to the euro system. Today, out of the fleet of 380,000 **vending machines** in France, 90,000 require a complete **replacement** of their coiner, an equipment which costs FFr 3,000 per machine. This cost is ten times higher than the cost of bringing a number of changes to the **electronic** programme of another 90,000, more modern machines. Though adapted to the euro system, the majority of the fleet (200,000 units) requires huge changes worth a cost of FFr 1,500-2,000 per machine.

PRODUCT: Economic Programmes (9108); **Vending Machines** (3581); Food & Drink Vending Services (5962);  
EVENT: Market & Industry News (60); International Economic Relations (95); Capital Expenditure (43);  
COUNTRY: France (4FRA); European Community (4EC);

15/5/42 (Item 10 from file: 583)  
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06625641  
PHS companies look to reposition devices  
JAPAN: POOR PERFORMANCE BY PHS INDUSTRY  
The Nikkei Weekly (NW) 20 Apr 1998 P.1  
Language: ENGLISH

The personal handy-phone system (PHS) which started in 1995 as a cheaper alternative to cellular phones is not doing well in Japan. PHS firms, the DDI Pocket Telephone group, the NTT Personal Communications **Network** group and the Astel group, gained 800,000 subscribers in fiscal 1997 though all of the net growth was in the upper half of the year. In the lower half of the year, the net number fell by 180,000. The total number of PHS subscribers is 6.88 mn or 21.8% of the 31.52 mn cellular users. The cellular sector performed better by gaining 10.65 mn subscribers in fiscal 1997. The three firms incurred a total of Y 590 bn (US\$ 4.47 bn) in losses. NTT Personal, which owns 30% of the market, registered losses of Y 240 bn

or 40% of the industry's losses. DDI Pocket posted a Y 150 bn loss by October 1997. Finally Astel, with a 20% market share, has accumulated Y 200 bn losses and Y 90 bn losses was incurred in fiscal 1997. These big losses have forced the firms to reduce expenses and to widen the usage of PHS. Besides trying to gain more subscribers, the firms will also raise the shipments of PHS devices and technology to other countries such as Thailand and Indonesia. The operators will also up the usage of PHS phones fitted for **automated** use; such as to be used to check on **vending machines** and parking lots remotely. The relay antennas of the PHS technology are small and thus can be positioned easily. The firms are also hoping to **replace** fixed-line phones with PHS phones. NTT will begin this service in Hokkaido in autumn 1998 and IBM Japan Ltd has installed the PHS **network** in its office to allow the internal usage of PHS phones. The operators will also increase the usage of PHS phones which can transmit information keyed into the device. The three firms will be launching designs of quicker data-communication ability with 32 kilobits for every second. DDI Tokyo Pocket Telephone Inc, a member of the DDI group, is increasing its relay stations by twofold to 40,000 by the end of April 1999. DDI Pocket will also inject Y 97 bn to increase the number of relay stations in 1998.

COMPANY: DDI TOKYO POCKET TELEPHONE; ASTEL; NTT PERSONAL COMMUNICATIONS  
NETWORK ; DDI POCKET TELEPHONE

PRODUCT: Cellular Radio Equipment (3662CE);  
EVENT: Companies Activities (10); Planning & Information (22);  
COUNTRY: Japan (9JPN);

15/5/43 (Item 11 from file: 583)  
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06545630  
Smart card invasion in July  
AUSTRALIA: 4 MAJOR BANKS TO LAUNCH SMART CARDS  
The Australian (XAA) 4 Nov 1997 P.38  
Language: ENGLISH

4 major banks in Australia would issue 8 mn Mondex smart cards from 1 July 1998. Some existing credit cards would be **replaced** as a result. Over 1 mn smart card readers would be installed in supermarkets, newsagents, service stations, lunch bars, dry cleaners and other shops and by **vending machine** proprietors. In mid-1998, Australians would be encouraged to make major changes to personal banking. This is because customers could **replenish** cash into their smart cards over the telephone without making a trip to the bank for withdrawals. The banks hope that consumers would use the smart cards for most small purchases as well as when travelling overseas. Furthermore, the smart cards have a role to play in **electronic** commerce as they could also be used to make retail purchases over the **Internet**.

COMPANY: **INTERNET**  
PRODUCT: Debit Card Svcs (6020DC); Nonbank Credit Card Firms (6141); Smart Cards (3078SC);  
EVENT: Plant/Facilities/Equipment (44);  
COUNTRY: Australia (9AUS);

15/5/44 (Item 12 from file: 583)  
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06495854

Geldautomat blickt Kunden tief ins Auge

GERMANY: NEW MACHINE FOR MONEY, TICKETS...

M nchner Merkur (XHO) 12/13 Jul 1997 p.27

Language: GERMAN

German firms NCR, Augsburg, and Sensar aim to **replace** the conventional PIN code system by a new **automated** teller machine which recognises customers by the iris of their eyes. An infrared beam scans the customer's retina. The new machine is to be used also for the purchase of flight tickets, insurance policies or shares of stock. The machines are to be introduced on the market in the fourth quarter of 1997.

COMPANY: SENSAR; NCR

PRODUCT: **Vending Machines** (3581); Food & Drink Vending Services (5962); Electronic Point of Sale Systems (3573EP); Electronic Banking Svcs (6005); Aviation Services (4500AS); Air Terminal Services (4595); Computer Terminals (3573TL); Communications Eqp ex Tel (3662);

EVENT: General Management Services (26); Product Design & Development (33); Marketing Procedures (24);

COUNTRY: Germany (4GER);

15/5/45 (Item 13 from file: 583)

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06452055

Electricity grid transmits data

US: DATA TRANSMITTED VIA ELECTRICITY CABLE

Sunday Times (ST) 30 Mar 1997 p. 3.13

Language: ENGLISH

A UK invention known as Power Line Carrier technology developed by RMS Communications is to be trialled in the US by the Jersey Electricity Company(JEC) which will use electricity cables to deliver data services rather than conventional telephone lines. JEC feels it is in a strong position to supply a **network** to **replace** costly dedicated telephone lines as its customers will be keen to move to a cheaper alternative. It plans to offer credit transactions and a number of other applications such as the remote monitoring of **vending machines**.

COMPANY: RMS COMMUNICATIONS; JERSEY ELECTRICITY COMPANY

PRODUCT: Data Communications Equipment (3661DC); Cables (3357CA);

EVENT: Product Design & Development (33);

COUNTRY: United States (1USA);

15/5/46 (Item 14 from file: 583)

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06398475

Vmesto larkov-avtomaty

RUSSIA: **VENDING MACHINES TO REPLACE KIOSKS**

Moskovsky komsomolets (ADV) 26 Nov 1996 p.1

Language: RUSSIAN

The Moscow city department for consumer market and services is developing the project of creating a **network of vending machines**, to **replace** kiosks at hotels, metro and railway stations. It will be possible to buy drinks, cigarettes and other small goods from the machines. It is planned that both foreign and domestic companies will be involved in production of **vending machines**.

PRODUCT: Retail Trade (5200);  
EVENT: General Management Services (26); Government Domestic Functions (97);  
COUNTRY: Russia (6USSRU);

15/5/47 (Item 15 from file: 583)  
DIALOG(R)File 583:Gale Group Globalbase(TM)  
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06235203  
Neue Trolleybusse  
SWITZERLAND: BERNE TO BUY NEW TROLLEY BUSES  
Der Bund (XGK) 27 Nov 1995 p.23  
Language: GERMAN

SVB <the municipal transport organisation of the Swiss city of Berne> will **order** eight new trolley buses with a **total value** of SFr 10.1mn. The articulated, low-platform buses are to be put into operation in the second half of 1997 and will **replace** 9 outdated trolleys. \*

PRODUCT: Passenger Transport (4001); Bus & Coaches (3711BC);  
EVENT: Capital Expenditure (43);  
COUNTRY: Switzerland (5SWI);

15/5/48 (Item 16 from file: 583)  
DIALOG(R)File 583:Gale Group Globalbase(TM)  
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06068862  
Jury out as \$10 coin goes into circulation  
HONGKONG: SWIRE CAUTIOUS ABOUT NEW COINS  
South China Morning Post (XKT) 01 Nov 1994 p.5  
Language: ENGLISH

Swire Bottle will wait for three months before switching its **vending machines** to accept new HKD 10 coins, after it recorded a loss of about HKD 1 million when a new HKD 1 coin was introduced a year ago, the company said. The first batch of 30,000 of the HKD 10 coins will be released today. The coins will gradually **replace** HKD 4.3 bn worth paper notes which account for 6.5% of the total money supply, the Hong Kong Monetary Authority said. Mass Transit Railway Corp already geared the **network** 's machines to accept the new coins. \*

COMPANY: HONG KONG MONETARY AUTHORITY; SWIRE BOTTLE

PRODUCT: **Vending Machines** (3581); Food & Drink Vending Services (5962); Beverages (2080);  
EVENT: Planning & Information (22);  
COUNTRY: Hong Kong (9HON);

15/5/49 (Item 17 from file: 583)  
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06067746

Le groupe Bull prepare certains desengagements d'activites

FRANCE: BULL TO SHED SOME OF ITS ACTIVITIES

Les Echos (LE) 20 Oct 1994 p.10

Language: FRENCH

The French group Bull is going to shed partly some of its activities, such as smart cards, automatic teller machines or electronic payment terminals, which are consolidated in a division called Bull Emerging Technologies (BET). Bull has drawn a plan to replace BET by a holding company held at 100% by Bull SA. Part of the capital of this holding company (49%) will be opened to one partner or more. The holding company will manage four subsidiaries, including Carte a Puces and Securite Logique. Distributeurs Automatiques Bancaires is going to be held at 100% by the holding company, while an activity Terminaux de Paiement Electronique is going to be created. Each of these subsidiaries, except for Distributeurs Automatiques Bancaires, is going to open up to 49% of its capital to other investors. In 1993, BET registered an operating loss of FFr 214mn and a turnover of FFr 920mn. In 1994, BET's operating loss is forecast FFr 112mn while its turnover is forecast FFr 1bn. With the creation of those four subsidiaries, Bull expects a recovery of BET. The plan has been proposed by Bull to representatives of its personnel during the works council meeting which took place on 19 October 1994.

COMPANY: BET; BULL

PRODUCT: Vending Machines (3581); Food & Drink Vending Services (5962); Debit Card Svcs (6020DC); Nonbank Credit Card Firms (6141); Smart Cards (3078SC); Computers & Auxiliary Equip (3573); Computer Software (7372);  
EVENT: Company Acquisitions (16); Company Formation (12); Company Formation (14);  
COUNTRY: France (4FRA);

15/5/50 (Item 18 from file: 583)  
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06044253

Dispensing with tool cribs

UK: AUTOMATIC TOOL DISPENSER LAUNCHED

Independent on Sunday (TIS) 11 Sep 1994 supplementp.1

Language: ENGLISH

Seco Tools, the tools manufacturer and distributor is to launch the Automatic Tool Dispenser (ATD) in the UK. The machine was developed by Electronic Merchandising Systems of Cincinnati, Ohio, which specialises in advanced dispensing systems and industrial control systems. It is intended to replace conventional tool cribs on factory floors and to improve productivity by reducing set-up times and queues. Workers obtain the tools by using a bar-coded identity card and personal code. Companies which use the ATD can also obtain information on tool use and employee work rates, and the ATD can help with the re-ordering of tools.

COMPANY: ELECTRONIC MERCHANDISING SYSTEMS; SECO TOOLS



PRODUCT: **Vending Machines** (3581); Food & Drink Vending Services (5962); General Industrial Machinery (3560);  
EVENT: Product Design & Development (33);  
COUNTRY: United Kingdom (4UK);

15/5/51 (Item 19 from file: 583)  
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06042278  
Zweiter Forschungsreaktor rueckt der RealitaetReaktor fuer Uni Muenc\  
GERMANY: SIEMENS TO ERECT RESEARCH REACTOR  
Frankfurter Allgemeine Zeitung (SDZ) 07 Sep 1994 p.19; Sueddeutsche  
Zeitung, 07 Sep 1994, p.42  
Language: GERMAN

The German electrical group Siemens is to act as the general contractor in the erection of the new Munich II research reactor worth a total of DM 680mn. The Siemens KWU division of energy generation, based in Erlangen, has been awarded this order and will account for DM 500mn of the total order value. Construction work is due to start in 1995. The reactor will be built for Munich's technical university and is financed by the federal and Bavarian governments. The new reactor will replace the existing one in Garching as regards the latter's position as Germany's central source of neutrons. The new reactor is to serve basic and applied research and, for instance, is to help develop less radical methods of cancer therapy.

COMPANY: SIEMENS  
PRODUCT: Research & Development (8510); Nuclear Energy Products (2991); Nuclear Electricity Generation (4911NE); Process Plant Construction (1629PR); Engineering Services (8911);  
EVENT: Research & Development Activity (45); Capital Expenditure (43); Use of Materials & Supplies (46); Contracts & Orders (61);  
COUNTRY: Germany (4GER);

15/5/52 (Item 20 from file: 583)  
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04484398  
National Car Rental/  
US - NATIONAL CAR RENTAL AND RAM MOBILE DATA IN AGREEMENT  
Communications (COM) 0 August 1991 p60

RAM Mobile Data will replace National Car Rental's private mobile data system with usage of its nationwide network at all of National's locations in the US. Five applications will be implemented by National, a bus tracking system for airport shuttle buses, the Computerised Asset Management System, vehicle sale inventory control, vehicle maintenance control and extension of National's Smart Key dispensing machines to several locations. Installation is due in November 1991.

COMPANY: RAM MOBILE DATA; NATIONAL CAR RENTAL  
PRODUCT: Mobile Data Communications Svcs (4811MD);  
EVENT: CONTRACTS WON (61);

COUNTRY: United States (1USA); NATO Countries (420); South East Asia  
Treaty Organisation (913);

15/5/53 (Item 21 from file: 583)  
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04214357

**VENDING MACHINE** OPERATORS TO INSTALL POS SYSTEMS  
JAPAN - **VENDING MACHINE** OPERATORS TO INSTALL POS SYSTEMS  
Business Tokyo (BO) 0 April 1991 p7  
ISSN: 0914-0026

Fuji Vending, UCC and Suntory (all Japan), leading drinks manufacturers, will begin linking their **vending machines** to distribution centres from April 1991 with a POS radio communications **network**. Distributors will use the POS system to establish which products need **replacement**. Japan's Ministry of Posts & Telecommunications will give grants to other **vending machine** operators who participate in the scheme.

PRODUCT: **Electronic** Point of Sale Systems (3573EP); Food Vending Equipment (3581FV); Food & Drink Vending Services (5962);  
EVENT: PLANT/FACILITIES/EQUIPMENT (44);  
COUNTRY: Japan (9JPN); OECD Pacific (915);

15/5/54 (Item 22 from file: 583)  
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04056224

Kraeftige Impulse durch Wiedervereinigung  
GERMANY - SALES OF **VENDING MACHINES** RISE BY 20% IN 1990  
Handelsblatt (HT) 24 January 1991 p18  
ISSN: 0017-7296  
Language: German

Germany: Sales of **vending machines** increased by 20% to DM460 mil in 1990. Some DM100 mil worth of German **vending machines** were exported, which represents an increase of 13% from 1989. In the former W Germany, some 680k cigarette **vending machines** needed **replacement**. Sales of **electronic** games in the former E Germany reached 19,700 games in 1990, with sales in the whole of Germany amounting to some 108k games.\*\*

PRODUCT: Food & Drink Vending Services (5962);  
EVENT: MARKET & INDUSTRY NEWS (60);  
COUNTRY: Germany (4GER); OECD Europe (415); European Economic Community Countries (419); NATO Countries (420);

15/5/55 (Item 23 from file: 583)  
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04028600

SINGAPORE NETS TO DEVELOP SINGLE STORED-VALUE CARD  
SINGAPORE NETS TO DEVELOP SINGLE STORED-VALUE CARD  
Straits Times (STT) 9 January 1991 p38

NETS ( **Network for Electronic Transfers**) is leading a campaign which aims to develop a single stored-value card which can be used to pay for a variety of services, from car parking to telephone calls and food from **vending machines** . The card will either be in the form of an ATM card or a Smart card. The aim is for national implementation of the scheme. A system which can carry out all the tasks cost effectively must be found. Currently NETS operates the only **Electronic Funds Transfer at Point-of-Sale (EFTPOS)** system which was launched in 1986 by five Singapore banks. NETS' older terminals will gradually be phased out over the next two years to be **replaced** by faster, smaller and more reliable terminals. NETS also wishes to diversify its **network** sectors to include travel agents, small retail outlets and medical and dental services. NETS has set out a five year plan on which it will invest S\$120 mil.

PRODUCT: Phone Cards (3078PH); Smart Cards (3078SC); **Electronic Point of Sale Systems** (3573EP); **Electronic Data Interchange** (4811ED); **Value Added Networks** (4840VA);  
EVENT: COMPANIES ACTIVITIES (10);  
COUNTRY: Singapore (9SIN); Pacific Rim (914);

15/5/56 (Item 24 from file: 583)

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03930238

Shilling becomes spent force

UK - VENDORS FORCED TO CONVERT **VENDING MACHINES**  
Independent (TI) 31 December 1990 p2

UK conversions of ticket and **vending machines** to accept the new 5p coin have cost GBP30-100 mil. From 1 January 1991 the old shilling will no longer be accepted, although banks will change them until end March 1991. Most **vending machines** now accept the new 5p, according to D Skinner, director and chief executive of the **Automatic Vending Assn** of Britain. During 1992 the 1p and 2p coins will be **replaced** , costing the vending industry a minimum of GBP35 mil.

PRODUCT: Food Vending Equipment (3581FV);  
EVENT: MARKET & INDUSTRY NEWS (60);  
COUNTRY: United Kingdom (4UK); OECD Europe (415); NATO Countries (420);  
South East Asia Treaty Organisation (913);

15/5/57 (Item 25 from file: 583)

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03272130

**AUTOMATIC VENDING ASSN FACES FURTHER PROBLEMS**

UK - **AUTOMATIC VENDING ASSN FACES FURTHER PROBLEMS**  
Financial Times (C) 1991 (FT) 4 February 1990 p24

The **Automatic Vending Assn**, already burdened with having to alter machines to take smaller 5p coins from June 1990, may also have to take thicker 1p and 2p pieces. This follows the announcement by the Treasury that it may use copper-plated steel to **replace** bronze to reduce the cost of making 1p and 2p coins. Profit from the Royal Mint has been declining in recent years. **Vending machine** companies will also have to take smaller 10p coins from June 1992.

Copyright: Financial Times Ltd 1991

PRODUCT: Food Vending Equipment (3581FV);  
EVENT: MARKET & INDUSTRY NEWS (60);  
COUNTRY: United Kingdom (4UK); OECD Europe (415); NATO Countries (420);  
South East Asia Treaty Organisation (913);

15/5/58 (Item 26 from file: 583)  
DIALOG(R)File 583:Gale Group Globalbase(TM)  
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01132270  
LONDON UNDERGROUND TO INVEST IN NEW VENDING MACHINES  
UK - LONDON UNDERGROUND TO INVEST IN NEW VENDING MACHINES  
Vending International (VI) 0 May 1987 p4

London Underground is to invest #1m in new **electronic vending machines** which are initially to be installed in King's Cross ticket hall. These new machines are to offer a larger variety of snacks and drinks and, if the trial is successful, other stations will follow suit around August. The current 500 mechanical machines situated on various stations are also to be **replaced** with vandalproof machines in an effort to increase the number of items sold to around 20m/y.\*

PRODUCT: Food & Drink Vending Services (5962);  
EVENT: MARKET & INDUSTRY NEWS (60);  
COUNTRY: United Kingdom (4UK); OECD Europe (415); NATO Countries (420);  
South East Asia Treaty Organisation (913);

15/5/59 (Item 1 from file: 256)  
DIALOG(R)File 256:TecInfoSource  
(c) 2005 Info.Sources Inc. All rts. reserv.

02715166 DOCUMENT TYPE: Company

**Isochron Data Corp (715166)**  
11044 Research Blvd. Building C, Suite 220  
Austin, TX 78759 United States  
TELEPHONE: (512) 732-2600  
TOLL FREE TELEPHONE NUMBER: (877) 305-5700  
FAX: (512) 732-2615  
HOMEPAGE: <http://www.isochron.com>  
EMAIL: [info@isochron.com](mailto:info@isochron.com)

RECORD TYPE: Directory

CONTACT: Sales Department

ORGANIZATION TYPE: Corporation  
STATUS: Active

Isochron (TM) Data Corporation provides clients across the vending industry with wireless data access and management tools. The firm's products support the capture of information from remote machines. They offers users customized reporting, data integration, LAN and WAN support, handheld computer support, and **Web** -based interface features. Isochron Data systems allow vending companies to streamline inventory **replenishment** operations. The products also provide users with **vending machine** sales and

marketing information.

NUMBER OF EMPLOYEES: 40

SALES: NA

DATE FOUNDED: 1997

PERSONNEL: Harris, Bill, Chairperson; Canter, Jim, VP Engineering; Godwin, Bryan, Chief Executive Officer; Godwin, Bryan, President; Nelson, Daniel, Operations Director

DESCRIPTORS: Mobile Computing; Wireless Internet

REVISION DATE: 20020530

15/5/60 (Item 2 from file: 256)

DIALOG(R) File 256:TecInfoSource

(c) 2005 Info.Sources Inc. All rts. reserv.

01111317 DOCUMENT TYPE: Product

PRODUCT NAME: CyberLock (111317

Videx Inc (335487)  
1105 NE Circle Blvd  
Corvallis, OR 97330 United States  
TELEPHONE: (541) 758-0521

RECORD TYPE: Directory

CONTACT: Sales Department

Videx's **CyberLock** (TM) converts mechanical locks into **electronic** access control systems. Users **replace** standard mechanical cylinders with **electronic** cylinders. Employing the bundled **CyberAudit** 1.2a software, users configure access privileges, create master and reset keys, and view audit event logs. Information can be maintained on all key holders. **CyberLock** allows users to assign multiple keys to single locks. The system also tracks lost or stolen keys, preventing unauthorized people from opening locked doors, cabinets, or **vending machines**. **CyberLock** 's reset key lets users reset passwords if system security is compromised. The product also allows users to define key expiration dates. **CyberLock** users employ one key to access multiple locks. The keys cannot be duplicated. Audit trails are created for locks and keys.

DESCRIPTORS: Building Security; Office Security

HARDWARE: Proprietary Hardware

OPERATING SYSTEM: Proprietary Operating Environment

PROGRAM LANGUAGES: Not Available

TYPE OF PRODUCT: Mainframe; Mini; Micro; Workstation

POTENTIAL USERS: Cross Industry

PRICE: Available upon request

REVISION DATE: 20021030

15/5/61 (Item 3 from file: 256)

DIALOG(R) File 256:TecInfoSource

(c) 2005 Info.Sources Inc. All rts. reserv.

00121633

DOCUMENT TYPE: Review

PRODUCT NAMES: Pharmacies (830198)

TITLE: Man vs. Machine: Are robotic dispensing machines indispensable...

AUTHOR: Barcia, Salvatore M

SOURCE: Health Management Technology, v20 n9 p24(2) Oct 1999

ISSN: 0745-1075

HOME PAGE: <http://www.healthmgttech.com>

RECORD TYPE: Review

REVIEW TYPE: Product Analysis

GRADE: Product Analysis, No Rating

Current pharmacy systems support and can expand pharmacy clinical services, but intelligent pharmacy software can never **replace** the expert, clinically versed pharmacist. Even so, pharmacy software systems have resulted in the use of fewer pharmacy staff, including licensed pharmacists and their assistants. Nevertheless, the pharmacist is the guardian of correct medication use in many healthcare settings. Most physicians depend mostly on pharmaceutical sales representatives for prescription information and will prescribe medications irrespective of their costs. Pharmacists are responsible for evaluating medication use and intervening as needed to consider current, future, and past use of medications. Although the use of pharmacy software systems may be emphasizing the pharmacist as practitioner, total clinical involvement is reduced due to **automation**. **Automation** also allows busy pharmacists to recognize more inappropriate doses, since a computer generated cart fill list generally provides clinical information that the pharmacist peruses during the cart fill process. The **automated dispensing machine** used on a nursing station could be 'the biggest threat to job status of pharmacists.' The systems provide a secure method for drug storage, communicate charges back to a pharmacy system, bill the system, securely store hundreds of medications, keep full patient profiles, and can almost eliminate cart fills.

COMPANY NAME: Vendor Independent (999999)

DESCRIPTORS: Health Care; Health Care Facilities; Health Insurance; Pharmacies; Robotics

REVISION DATE: 20020630

?

Set	Items	Description
S1	1172036	INVENTORY OR INVENTORIES
S2	2116753	RESTOCK? OR RE()STOCK? OR REPLENISH? OR REPLAC?
S3	17922578	ONLINE OR ON()LINE OR INTERNET OR INTRANET? OR NETWORK? ? - OR SERVER? ? OR WEB? OR PORTAL? OR WWW OR CYBER? OR ELECTRONI- C? OR AUTOMAT?
S4	44531	(DISPENSING OR VENDING) () (MACHINE? OR UNIT? ?)
S5	6377010	CUMULATIVE OR AGGREGAT? OR TOTAL?
S6	7866523	VALUE? ? OR QUANTITY OR QUANTITIES OR AMOUNT OR ITEM? ?
S7	5390914	ORDER? ? OR ORDERING
S8	383164	S5 (5N) S6
S9	9059	S8 (10N) S7
S10	0	S9 (S) S4
S11	8	S9 (2S) S4
S12	406	S9 (2S) S2
S13	412	S4 (20N) S2 (20N) S3
S14	48	S13 (S) S7
S15	59	S13 (20N) S1
S16	101	S11 OR S14 OR S15
S17	56	S16 NOT PY>2000
S18	35	RD (unique items)

? show file

File 9:Business & Industry(R) Jul/1994-2005/Dec 28

(c) 2005 The Gale Group

File 15:ABI/Inform(R) 1971-2005/Dec 29

(c) 2005 ProQuest Info&Learning

File 16:Gale Group PROMT(R) 1990-2005/Dec 29

(c) 2005 The Gale Group

File 148:Gale Group Trade & Industry DB 1976-2005/Dec 28

(c) 2005 The Gale Group

File 160:Gale Group PROMT(R) 1972-1989

(c) 1999 The Gale Group

File 275:Gale Group Computer DB(TM) 1983-2005/Dec 29

(c) 2005 The Gale Group

File 621:Gale Group New Prod.Annou.(R) 1985-2005/Dec 28

(c) 2005 The Gale Group

File 636:Gale Group Newsletter DB(TM) 1987-2005/Dec 29

(c) 2005 The Gale Group

*considered qf 7 1/22/06*

18/3,K/1 (Item 1 from file: 9)  
DIALOG(R)File 9:Business & Industry(R)  
(c) 2005 The Gale Group. All rts. reserv.

02328177 Supplier Number: 25933258 (USE FORMAT 7 OR 9 FOR FULLTEXT)  
**Back to the Future**  
(Horn & Hardart Bakery Cafe has opened its first outlet in Philadelphia, PA, with about 20 more planned to open by mid-2001 in Pennsylvania, Florida and New Jersey)  
Restaurants & Institutions, v 110, n 33, p 15  
December 15, 2000  
DOCUMENT TYPE: Journal ISSN: 0273-5520 (United States)  
LANGUAGE: English RECORD TYPE: Fulltext  
WORD COUNT: 242

(USE FORMAT 7 OR 9 FOR FULLTEXT)

TEXT:  
...variety of breakfast breads, trendy sandwiches and wraps, as well as counter staff to fill orders, are replacing the old coin-operated vending machines. (The first Automat, however, can be viewed at the Smithsonian Institution.) As in the old Horn & Hardart restaurants...

18/3,K/2 (Item 2 from file: 9)  
DIALOG(R)File 9:Business & Industry(R)  
(c) 2005 The Gale Group. All rts. reserv.

02108275 Supplier Number: 25550277 (USE FORMAT 7 OR 9 FOR FULLTEXT)  
**Respite from a Wired World**  
(Forecasts for the food industry in 2025 include increased appreciation for authentic ethnic cuisine, and the distinction between groceries and restaurant food will blur; forecasts other trends)  
Food Management, v 35, n 1, p 47+  
January 2000  
DOCUMENT TYPE: Journal ISSN: 0091-018X (United States)  
LANGUAGE: English RECORD TYPE: Fulltext  
WORD COUNT: 2975

(USE FORMAT 7 OR 9 FOR FULLTEXT)

TEXT:  
...hour" traffic and technologically-sophisticated vending technologies will converge to justify third and fourth-generation vending machines that are light years ahead of what are available today.

"Vending machines like those we have today will be in the museums," says Wolf.  
Replacing them will be Internet-savvy equipment that manages inventory, optimizes pricing based on demand, offers multiple electronic payment options and retherms food automatically.

Packaging Will Drive Products

"You see the direction this is taking at some of the...

18/3,K/3 (Item 3 from file: 9)  
DIALOG(R)File 9:Business & Industry(R)  
(c) 2005 The Gale Group. All rts. reserv.



02036550 Supplier Number: 25515546 (USE FORMAT 7 OR 9 FOR FULLTEXT)  
**E-commerce Begins Making Gains**  
(European Union e-commerce to reach Euro340 bil in 2003; European ink  
sector has been relatively slow to embrace e-commerce)  
Ink World, v 5, n 12, p 16+  
December 1999  
DOCUMENT TYPE: Journal ISSN: 1093-328X (United States)  
LANGUAGE: English RECORD TYPE: Fulltext  
WORD COUNT: 1509

(USE FORMAT 7 OR 9 FOR FULLTEXT)

TEXT:

...start to pay its way."

Other Uses

Other ink companies have already set up vital **electronic** links with customers for the running of inventory management systems. These allow **automatic restocking** without the need for going through an **ordering** process and could, perhaps, provide a framework for an e-commerce **network**.

Sericol, the U.K.-based screen printing inks supplier, has been introducing a color **dispensing machine** for customers; which is connected **on - line** to a computer at a Sericol site.

The machine, with computer-controlled dispensing heads for its 13 colors, tells Sericol's staff not only when **restocking** is required but also that the newly supplied colors are exactly the right match.

But...

18/3,K/4 (Item 4 from file: 9)  
DIALOG(R)File 9:Business & Industry(R)  
(c) 2005 The Gale Group. All rts. reserv.

01445109 Supplier Number: 24116375  
**Internet For Toys and Fax Machines**  
(Two-year old start- up iReady Corp claims its Internet Tuner technology is ready to shape a future of consumer, medical, and communication **electronics products which will connect to the Internet**)  
Newsbytes News Network, p N/A  
December 16, 1997  
DOCUMENT TYPE: Journal (United States)  
LANGUAGE: English RECORD TYPE: Fulltext  
WORD COUNT: 526

TEXT:

...continued. "Any toy can get new features, new vocabulary, new images just by accessing the **Internet** through a standard phone line." For companies Minami said, "Fax machines can access the **Internet** to bypass long distance fax charges and send faxes over e-mail or **vending machine** can access the **Internet** to tell a supplier it is time to **restock** the machine. Cash registers can access the **Internet** from around the world to get price changes and reflect **inventory** changes as items are sold. The possibilities are almost endless." With \$7 million of second...

18/3,K/5 (Item 1 from file: 15)  
DIALOG(R)File 15:ABI/Inform(R)  
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02069653 60397702  
**Take your business mobile**  
Rao, Ananth  
Communications News v37n9 PP: 104-106 Sep 2000  
ISSN: 0010-3632 JRNL CODE: CNE  
WORD COUNT: 1048

...TEXT: usually away from their desks through use of mobile data communications. Construction-related businesses can **order** supplies from the construction site, communicate with contractors and access invoices wirelessly. Service professionals can respond **electronically** to customer requests and **order** supplies without waiting to return to the office. Sales and field force professionals update information **automatically** from the field.

Hello World, which sells prepaid calling cards through **vending machines**, is a good example of a business benefiting from mobile data. Its field professionals visit **vending machines** located at convenience stores, **restock** the machines and collect the money from machines.

Previously, the field force would call in...

18/3,K/6 (Item 2 from file: 15)  
DIALOG(R)File 15:ABI/Inform(R)  
(c) 2005 ProQuest Info&Learning. All rts. reserv.

01172574 98-21969  
**The Skywire's the limit**  
Sfiligoj, Eric  
Beverage World v115n1608 PP: 84 Feb 1996  
ISSN: 0098-2318 JRNL CODE: BEV  
WORD COUNT: 431

...ABSTRACT: telemetry system that uses small, low-cost radio modems attached to vendors to report detailed **inventory**, sales and maintenance information through a nationwide **network** to a PC in a bottling company's home office. Using Vendview, a driver knows exactly how much product is left in a **vending machine**, keeping him or her from making unnecessary stops at machines that do not need **re - stocking**.

18/3,K/7 (Item 1 from file: 16)  
DIALOG(R)File 16:Gale Group PROMT(R)  
(c) 2005 The Gale Group. All rts. reserv.

08246667 Supplier Number: 69237157 (USE FORMAT 7 FOR FULLTEXT)  
**Does SOC Really Exist?(Industry Trend or Event)**  
PEISEL, WILLIAM E.  
Electronic News (1991), v46, n49, p22  
Dec 4, 2000  
Language: English Record Type: Fulltext  
Document Type: Magazine/Journal; Trade  
Word Count: 757

... new ways to think about and approach productivity. Imagine, for instance, your networked office printer **automatically ordering** service and maintenance along with a list of needed repair parts, or the **vending machine** in your office placing a **restocking order** with the warehouse.

We can't even begin to conceive of all the changes that this shift in design will inspire, but just as adding **network** connectivity and more processing power to the desktop computer has driven an entire industry, so ...

**18/3,K/8 (Item 2 from file: 16)**

DIALOG(R)File 16:Gale Group PROMT(R)

(c) 2005 The Gale Group. All rts. reserv.

08156658 Supplier Number: 68159872 (USE FORMAT 7 FOR FULLTEXT)

**BACK TO THE FUTURE.(Horn & Hardart Bakery Cafe )(Brief Article)**

Restaurants & Institutions, v110, n33, p15

Dec 15, 2000

Language: English Record Type: Fulltext

Article Type: Brief Article

Document Type: Magazine/Journal; Trade

Word Count: 258

... variety of breakfast breads, trendy sandwiches and wraps, as well as counter staff to fill **orders** , are **replacing** the old coin-operated **vending machines** . (The first **Automat** , however, can be viewed at the Smithsonian Institution.) As in the old Horn & Hardart restaurants...

**18/3,K/9 (Item 3 from file: 16)**

DIALOG(R)File 16:Gale Group PROMT(R)

(c) 2005 The Gale Group. All rts. reserv.

07949890 Supplier Number: 65640158 (USE FORMAT 7 FOR FULLTEXT)

**Take your business mobile.(Company Business and Marketing)**

Rao, Ananth

Communications News, v37, n9, p104

Sept, 2000

Language: English Record Type: Fulltext Abstract

Document Type: Magazine/Journal; Trade

Word Count: 1048

... usually away from their desks through use of mobile data communications. Construction-related businesses can **order** supplies from the construction site, communicate with contractors and access invoices wirelessly. Service professionals can respond **electronically** to customer requests and **order** supplies without waiting to return to the office. Sales and field force professionals update information **automatically** from the field.

Hello World, which sells prepaid calling cards through **vending machines** , is a good example of a business benefiting from mobile data. Its field professionals visit **vending machines** located at convenience stores, **restock** the machines and collect the money from machines.

Previously, the field force would call in...

**18/3,K/10 (Item 4 from file: 16)**

DIALOG(R)File 16:Gale Group PROMT(R)

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07750623      Supplier Number: 64774183    (USE FORMAT 7 FOR FULLTEXT)  
**CellPoint Subsidiary Unwire Signs \$8 Million Contract German Company**  
    **Commits to 24,000 Telematics Terminals.**  
Business Wire, p2344  
August 28, 2000  
Language: English      Record Type: Fulltext  
Document Type: Newswire; Trade  
Word Count:      629

... agreement with the German systems integrator PhoneTrans AG.  
PhoneTrans, a preferred vendor in the German **vending machine** market,  
has committed to purchase a minimum of 24,000 telematics terminals from  
Unwire over...

...only for Unwire but also for the telematics industry as a whole. Even  
though the **total value** of this **order** is in the region of \$8 million  
it is only a fraction of the market...

...very confident of the strong position we have today and for the future."

    In the **vending machine** marketplace, Unwire's terminals will  
automatically notify owners of low stock levels, saving companies time...  
...the closest service personnel to be dispatched. It is also possible to  
add functions to **vending machines** so that purchasers will be able to  
buy items from **vending machines** using their mobile phone.

    Unwire AB (www.unwire.com) is a wholly-owned subsidiary of...

18/3,K/11      (Item 5 from file: 16)  
DIALOG(R)File 16:Gale Group PROMT(R)  
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07150806      Supplier Number: 59360809    (USE FORMAT 7 FOR FULLTEXT)  
**Respite from a Wired World.(Brief Article)**  
LAWN, JOHN  
Food Management, v35, n1, p47  
Jan, 2000  
Language: English      Record Type: Fulltext  
Article Type: Brief Article  
Document Type: Magazine/Journal; Trade  
Word Count:      3053

... hour" traffic and technologically-sophisticated vending  
technologies will converge to justify third and fourth-generation **vending**  
**machines** that are light years ahead of what are available today.

**"Vending machines** like those we have today will be in the  
museums," says Wolf.

**Replacing** them will be **Internet** -savvy equipment that manages  
**inventory** , optimizes pricing based on demand, offers multiple **electronic**  
payment options and retherms food **automatically** .

**Packaging Will Drive Products**

    "You see the direction this is taking at some of the...

18/3,K/12      (Item 6 from file: 16)  
DIALOG(R)File 16:Gale Group PROMT(R)  
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07046647      Supplier Number: 57829131    (USE FORMAT 7 FOR FULLTEXT)  
**COMPONENTS.(Brief Article)**

Appliance Manufacturer, v47, n11, p62  
Nov, 1999  
Language: English Record Type: Fulltext  
Article Type: Brief Article  
Document Type: Magazine/Journal; Trade  
Word Count: 734

... connector is used in applications such as slot machines and arcade games, as well as **vending machine** applications. AMP, Inc., Harrisburg, Pa. Circle 222

**REPLACEMENT** MOTORS, BLOWERS, FAN BLADES, BLOWER WHEELS AND ACCESSORIES are available in the new **Replacement** Products Catalog Number 39 from Fasco for applications associated with heating, air conditioning, refrigeration, and ventilation. A complete **inventory** of featured catalog products is maintained throughout a **network** of authorized distributors. Fasco Distributing Company, Eldon, Mo. Circle 217  
POWER ENTRY MODULE combines an...

18/3,K/13 (Item 7 from file: 16)  
DIALOG(R)File 16:Gale Group PROMT(R)  
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06441975 Supplier Number: 55009602 (USE FORMAT 7 FOR FULLTEXT)  
**Heavyweight AT&T links up with ETI.**(Embed the Internet Alliance)(Editorial)  
MacLellan, Andrew  
Electronic Buyers' News, p32  
June 28, 1999  
Language: English Record Type: Fulltext  
Article Type: Editorial  
Document Type: Magazine/Journal; Trade  
Word Count: 527

... bit microcontrollers. By empowering these low-cost and pervasive devices with lightweight links to the **Internet**, ETI is aiming to give industrial, retail, and distribution channels-as well as a potentially huge consumer base-the ability to remotely communicate with a vast number of **electronics** products.

From washing machines that alert the service center to **replace** worn parts, to **vending machines** that provide **inventory** updates, to industrial controls that can be recalibrated from thousands of miles away, the potential of **Internet** -enabled **electronics** is drawing interest from a wide range of companies.

Hardware providers Analog Devices, Atmel, Hitachi...

18/3,K/14 (Item 8 from file: 16)  
DIALOG(R)File 16:Gale Group PROMT(R)  
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05835239 Supplier Number: 50346642 (USE FORMAT 7 FOR FULLTEXT)  
**B.W. Stetson: seek opportunity, study it, then educate market**  
Maras, Elliot  
Automatic Merchandiser, p28  
Sept, 1998  
Language: English Record Type: Fulltext  
Article Type: Article  
Document Type: Magazine/Journal; Trade  
Word Count: 2204

... Facing the need to reduce expenses, the glass factories agreed to let B.W. Stetson **replace** the cafeterias with vending banks. But in order to ease the transition from manual cafeteria to **vending machines**, on-site **servers** were provided during the busy periods. 'That was not an easy task to do,' said...

18/3,K/15 (Item 9 from file: 16)  
DIALOG(R)File 16:Gale Group PROMT(R)  
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05756716 Supplier Number: 50241364 (USE FORMAT 7 FOR FULLTEXT)

**DRUG STORES**

Chain Store Age Executive with Shopping Center Age, v74, n8, p34  
August, 1998

Language: English Record Type: Fulltext

Article Type: Article

Document Type: Magazine/Journal; Trade

Word Count: 297

(USE FORMAT 7 FOR FULLTEXT)

TEXT:

...S. government of \$11.5 million by partially filling prescriptions and then totally billing the **orders**. Although the chain acknowledged it has received federal grand jury subpoenas seeking documents, it...

...on the West Coast. To reduce wait times in its pharmacies, the chain will install **automated dispensing machines** in 1,000 stores by yearend. Each machine dispenses 85 Rx's an hour (by comparison...

...staff typically generate 20 to 30 scripts per hour). . . . Genovese Drug will test a new **replenishment** /perpetual **inventory** management system designed to improve store-service levels and reduce store-level dollars substantially. The...

18/3,K/16 (Item 10 from file: 16)  
DIALOG(R)File 16:Gale Group PROMT(R)  
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05381296 Supplier Number: 48182689 (USE FORMAT 7 FOR FULLTEXT)

**Internet For Toys and Fax Machines 12/16/97**

Newsbytes, pN/A

Dec 16, 1997

Language: English Record Type: Fulltext

Document Type: Newswire; General Trade

Word Count: 535

... continued. "Any toy can get new features, new vocabulary, new images just by accessing the **Internet** through a standard phone line."

For companies Minami said, "Fax machines can access the **Internet** to bypass long distance fax charges and send faxes over e-mail or **vending machine** can access the **Internet** to tell a supplier it is time to **restock** the machine. Cash registers can access the **Internet** from around the world to get price changes and reflect **inventory** changes as items are sold. The possibilities are almost endless."

With \$7 million of second...

18/3,K/17 (Item 11 from file: 16)

DIALOG(R)File 16:Gale Group PROMT(R)  
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05357356 Supplier Number: 48148459 (USE FORMAT 7 FOR FULLTEXT)  
**Phone-Card Phenomenon**  
Non-Foods Merchandising, p30  
Dec, 1997  
Language: English Record Type: Fulltext  
Document Type: Magazine/Journal; Tabloid; Trade  
Word Count: 1115

... get cards.  
'Most supermarkets are using vending machines and, in some cases, we stock [card **inventory** in] the machines for them,' says Clive Barwin, president of Datawave, a Vancouver, British Columbia-based manufacturer of **vending machines**.

The machines eliminate shrinkage, markdowns and pilferage, Barwin says. Retailers pay Datawave only when cards are sold. When the cards are running low, the machine **automatically** contacts Datawave, which then dispatches a service representative to **restock** the machine.

Grand Union, Pathmark and Price Choppers are trying out Datawave's new Business Center **vending machine**, which in addition to phone cards dispenses stamps, pre-paid cellular phone cards, pre-paid...

18/3,K/18 (Item 12 from file: 16)  
DIALOG(R)File 16:Gale Group PROMT(R)  
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05069351 Supplier Number: 47441894 (USE FORMAT 7 FOR FULLTEXT)  
**Pyxis Corporation Introduces MedStation-Rx System 2000, Minidrawers, and CII Safe-NV**  
PR Newswire, p0603CLTU035  
June 3, 1997  
Language: English Record Type: Fulltext  
Document Type: Newswire; Trade  
Word Count: 709

... transactions. In addition, it is the only controlled substance tracking system capable of interfacing with **Automated Dispensing Machines** located throughout patient care areas to provide real-time information, including medication **restocking** confirmation, to the pharmacy.

Pyxis is also previewing several important future product offerings at the ASHP's Annual Meeting. These products, Pyxis Auto- **Replenishment** (TM) (PAR) and PyxisConnect(TM), are designed to increase the overall value of its MedStation-Rx systems. PAR is a value added enhancement to the MedStation product line. PAR **automates** the pick, check, and delivery functions for acute care pharmacies by utilizing innovative, hand held...  
...benefits of PAR are maximized when used in conjunction with CardinalCHOICE(R) inventory management and **order** -entry systems and Cardinal's proprietary PyxisPak(TM) low unit of measure packaging.

PyxisConnect provides...

18/3,K/19 (Item 13 from file: 16)  
DIALOG(R)File 16:Gale Group PROMT(R)  
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04196149 Supplier Number: 46134956 (USE FORMAT 7 FOR FULLTEXT)

**VISTA 2000, INC. ANNOUNCES FIRST COMPUTERIZED "SELF-SERVICE" KEY MAKER;  
EXPANDS ITS COLE KEY OPERATIONS**

PR Newswire, p208ATTH014

Feb 8, 1996

Language: English Record Type: Fulltext

Document Type: Newswire; Trade

Word Count: 478

... is a self-contained unit and can be configured to stand alone or as a **vending machine** with credit card swipe or dollar bill interface. It will be able to communicate with...

...Data Center at its American Consumer Products, Inc. (ACPI) offices in Cleveland, Ohio to provide **inventory** status and **automatically order** re - **stocks** of sold out keys. It features robotic, servo-driven, long-life cutter tooling and a...

18/3,K/20 (Item 14 from file: 16)

DIALOG(R)File 16:Gale Group PROMT(R)

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04182810 Supplier Number: 46110520 (USE FORMAT 7 FOR FULLTEXT)

**CLEVELAND CLINIC NAMES MCKESSON AS PRIME VENDOR FOR PHARMACEUTICALS**

Hospital Materials Management, v20, n2, pN/A

Feb 1, 1996

Language: English Record Type: Fulltext

Document Type: Newsletter; Trade

Word Count: 175

(USE FORMAT 7 FOR FULLTEXT)

TEXT:

...management services. In addition to supplying pharmaceuticals, McKesson will help the Cleveland Clinic develop new **inventory** management and distribution logistics, including **replenishment** of **automated dispensing units** , and provide new information system capabilities.

18/3,K/21 (Item 15 from file: 16)

DIALOG(R)File 16:Gale Group PROMT(R)

(c) 2005 The Gale Group. All rts. reserv.

04143264 Supplier Number: 46048721 (USE FORMAT 7 FOR FULLTEXT)

**The Cleveland Clinic Foundation awards multi-year contract to McKesson.**

Business Wire, p01081044

Jan 8, 1996

Language: English Record Type: Fulltext

Document Type: Newswire; Trade

Word Count: 435

... pharmaceuticals, we'll be working together to help the Cleveland Clinic develop new levels of **inventory** management and distribution logistics, including **replenishment** of **automated dispensing units** . We also will provide the clinic with new information system capabilities."

"We are excited to...

18/3,K/22 (Item 16 from file: 16)

DIALOG(R)File 16:Gale Group PROMT(R)

(c) 2005 The Gale Group. All rts. reserv.



03471672      Supplier Number: 44847873      (USE FORMAT 7 FOR FULLTEXT)  
**Wireless Links Are Gaining Popularity**  
Open Systems Today, p40  
July 18, 1994  
Language: English      Record Type: Fulltext  
Document Type: Newsletter; Trade  
Word Count:      520

...      example, one of McCaw's customers is a bottler testing a wireless link between its **vending machines** and distribution centers. When the machine runs out of soda, it places an **order automatically**. 'This is not a **replacement** for wires; there was no connection before,' Brandos said.

- K.J.H.

18/3,K/23      (Item 17 from file: 16)  
DIALOG(R)File 16:Gale Group PROMT(R)  
(c) 2005 The Gale Group. All rts. reserv.

02520264      Supplier Number: 43334438      (USE FORMAT 7 FOR FULLTEXT)  
**Operators can gain with creative merchandising**  
Automatic Merchandiser, p80  
Oct, 1992  
Language: English      Record Type: Fulltext  
Document Type: Magazine/Journal; Trade  
Word Count:      1536

...      successfully sold to these 'captive' customers, even if they did not come out of a **vending machine**.

Take holiday-related items, such as plush animals or cookie assortments at Christmas, Easter baskets...

...the distribution date. With a little experience, the operator should be able to estimate the **total** number of **items** he/she should **order**, based upon counting responses from each location, each week. Well-chosen items will inspire last...

18/3,K/24      (Item 18 from file: 16)  
DIALOG(R)File 16:Gale Group PROMT(R)  
(c) 2005 The Gale Group. All rts. reserv.

01977171      Supplier Number: 42530958  
**Kinki Coca-Cola Bottling - Company Report**  
Investext, p1-1  
Nov 18, 1991  
Language: English      Record Type: Abstract  
Document Type: Magazine/Journal; Trade

ABSTRACT:

...years to 1990 against the national average of 2.3%. The company had 87,000 **vending machines** as of the end of the last term to date, and plans to increase the...

...of the 10,000-odd new machines the company plans to install this term will **replace** older machines). Kinki indicated that 60-70% of its sales are via **vending machines**.

Tables in report: Operating Performance Data & Rating 1989-92

The INVESTEXT database offers the full text of this report **online** (RN=1154574). To order printed copies, CALL (800)662-7878, (617)345-2000 US, (071)836-8223 UK, (03...

18/3,K/25 (Item 1 from file: 148)  
DIALOG(R)File 148:Gale Group Trade & Industry DB  
(c)2005 The Gale Group. All rts. reserv.

12106178 SUPPLIER NUMBER: 59214885 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Automation Offers Alternative for Ordering Supplies.(Brief Article)(Editorial)**  
Homes, Bill  
San Diego Business Journal, 21, 2, 15  
Jan 10, 2000  
DOCUMENT TYPE: Brief Article Editorial ISSN: 8750-6890 LANGUAGE:  
English RECORD TYPE: Fulltext  
WORD COUNT: 620 LINE COUNT: 00056

... ever-increasing use of technology in the workplace; Web-based systems such as automated supply **vending machines** will affect business practices just as the PC has over the past two decades.  
Holmes...

18/3,K/26 (Item 2 from file: 148)  
DIALOG(R)File 148:Gale Group Trade & Industry DB  
(c)2005 The Gale Group. All rts. reserv.

11779550 SUPPLIER NUMBER: 58328159 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**A cut above.**  
Fraza, Victoria  
Industrial Distribution, 88, 12, 46  
Dec, 1999  
ISSN: 0019-8153 LANGUAGE: English RECORD TYPE: Fulltext  
WORD COUNT: 1888 LINE COUNT: 00149

... customer. Dubbed the CHS-Connection, the program can include several key elements: bar coding; EDI; **automated inventory replenishment**; integrated supply; consignment **inventory**; computerized tool **dispensing machines**; one purchase order to cover annual needs; price stabilization; and once-a-month billing.  
One of the fastest-growing components of the CHS-Connection is its **vending machine** program. The company has about 20 tool vending machines set up at various customers' plants...

18/3,K/27 (Item 3 from file: 148)  
DIALOG(R)File 148:Gale Group Trade & Industry DB  
(c)2005 The Gale Group. All rts. reserv.

11769195 SUPPLIER NUMBER: 57829131 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**COMPONENTS.**  
Appliance Manufacturer, 47, 11, 62  
Nov, 1999  
ISSN: 0003-679X LANGUAGE: English RECORD TYPE: Fulltext  
WORD COUNT: 790 LINE COUNT: 00067

... connector is used in applications such as slot machines and arcade games, as well as **vending machine** applications. AMP, Inc., Harrisburg,

Pa. Circle 222

**REPLACEMENT** MOTORS, BLOWERS, FAN BLADES, BLOWER WHEELS AND ACCESSORIES are available in the new **Replacement** Products Catalog Number 39 from Fasco for applications associated with heating, air conditioning, refrigeration, and ventilation. A complete **inventory** of featured catalog products is maintained throughout a **network** of authorized distributors. Fasco Distributing Company, Eldon, Mo. Circle 217  
POWER ENTRY MODULE combines an...

18/3,K/28 (Item 4 from file: 148)  
DIALOG(R)File 148:Gale Group Trade & Industry DB  
(c)2005 The Gale Group. All rts. reserv.

10051598 SUPPLIER NUMBER: 20359232 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Own no tool before its time. (supply of cutting tools) (Cover Story)**  
Zelinski, Peter  
Modern Machine Shop, v70, n8, p66(9)  
Jan, 1998  
DOCUMENT TYPE: Cover Story ISSN: 0026-8003 LANGUAGE: English  
RECORD TYPE: Fulltext; Abstract  
WORD COUNT: 3648 LINE COUNT: 00270

... In essence, it's an open box of tooling. But the virtue of using a **vending machine** instead of an open box is the orderly way the tools go out. They fall one at a time, according to the **order** in which they were queued in the indexing screw. This makes all the difference. It makes **restocking** an **automatic** process.

Near the end of each row of product is a card that says it...

18/3,K/29 (Item 5 from file: 148)  
DIALOG(R)File 148:Gale Group Trade & Industry DB  
(c)2005 The Gale Group. All rts. reserv.

08902089 SUPPLIER NUMBER: 18595687  
**Powerline communication: wireless technology.**  
Strassberg, Dan  
EDN, v41, n12, p71(5)  
June 6, 1996  
ISSN: 0012-7515 LANGUAGE: English RECORD TYPE: Fulltext; Abstract  
WORD COUNT: 2659 LINE COUNT: 00223

... communication has enjoyed success include hospital patient-data-management systems, point-of-sale terminals, and **vending machines**. Networked **vending machines** **automatically** report malfunctions and continually update **inventory** databases, letting the machine operator minimize **inventory** and avoid unnecessary trips for **restocking**. Few **vending machines** are near telephone lines, however, so, without powerline communication, networking a **vending machine** usually requires installing a phone line. Of course, the machine must also incorporate a telephone...

18/3,K/30 (Item 6 from file: 148)  
DIALOG(R)File 148:Gale Group Trade & Industry DB  
(c)2005 The Gale Group. All rts. reserv.

06770295 SUPPLIER NUMBER: 14528860 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Timely tools. (Automatic Tool Dispenser by Electronic Merchandising**

**Systems) (Brief Article)**

Sprout, Alison L.

Fortune, v128, n14, p181(1)

Nov 29, 1993

DOCUMENT TYPE: Brief Article

ISSN: 0015-8259

LANGUAGE: ENGLISH

RECORD TYPE: FULLTEXT

WORD COUNT: 240      LINE COUNT: 00018

**18/3,K/31      (Item 7 from file: 148)**

DIALOG(R)File 148:Gale Group Trade & Industry DB

(c)2005 The Gale Group. All rts. reserv.

05389779      SUPPLIER NUMBER: 11606172

**Motorola to unveil radio data modem; breakthrough size reduction enables  
modem to be built into mobile computers, other devices. (Motorola Inc.  
Mobile Data Division's RPM405i) (Product Announcement)**

Cummings, Joanne

Network World, v8, n49, p27(1)

Dec 9, 1991

DOCUMENT TYPE: Product Announcement

ISSN: 0887-7661

LANGUAGE:

ENGLISH

RECORD TYPE: ABSTRACT

...ABSTRACT: computers, pen-based computers and palm-sized computers. The RPM405i can also support such wireless **network** applications as hand-held wireless terminals for **order** entry on a sales floor and **vending machines** that signal when they need to be **restocked** or repaired. The modem is comprised of a wallet-sized low-power-consumption radio and...

...the radio uses three watts of power and communicates data packets over wireless public data **networks** ; the logic board is based on an MC56156 digital signal processor chip. The modem supports...

**18/3,K/32      (Item 8 from file: 148)**

DIALOG(R)File 148:Gale Group Trade & Industry DB

(c)2005 The Gale Group. All rts. reserv.

02449516      SUPPLIER NUMBER: 04049037

**Term-Tronics may be turning video to gold.**

Olsen, Bill

San Diego Business Journal, p8(1)

Dec 2, 1985

ISSN: 8750-6890

LANGUAGE: ENGLISH

RECORD TYPE: ABSTRACT

ABSTRACT: Term-Tronics has built a prototype video **vending machine** which holds 660 cassettes, **automatically restocks** returns, and sells tapes. Manufacturing costs \$12,000 and **inventory** costs \$12,000. The machine, slightly larger than a soda machine, is hooked to an IBM mainframe, from which 5000 **vending machines** can be run.

**18/3,K/33      (Item 1 from file: 275)**

DIALOG(R)File 275:Gale Group Computer DB(TM)

(c) 2005 The Gale Group. All rts. reserv.

02360016      SUPPLIER NUMBER: 58379331

(USE FORMAT 7 OR 9 FOR FULL TEXT)

**Accepting the Inevitable. (Company Business and Marketing)**

Horowitz, Alan

Intelligent Enterprise, 2, 18, 12

Déc 21, 1999

LANGUAGE: English      RECORD TYPE: Fulltext  
WORD COUNT: 414      LINE COUNT: 00036

... was originally just an organizer and scheduler, it can now provide access to inventory levels, **order** status, sales lead follow-ups, prices, and other information, says Christopher Fletcher, managing director for...

...are tons of verticals (markets) for these, including pharmaceuticals, Coca Cola delivery drivers, (and) those **restocking vending machines**," observes Fletcher. Gold sees the power of these devices eventually being able to handle even ERP and sales-force **automation** applications.

Sensing the changes in the air, Sun Microsystems has announced it will support the...

18/3,K/34      (Item 1 from file: 621)

DIALOG(R) File 621:Gale Group New Prod.Annou.(R)  
(c) 2005 The Gale Group. All rts. reserv.

01076084      Supplier Number: 40408949 (USE FORMAT 7 FOR FULLTEXT)  
**FIRST PERMANENTLY POWERED TIME MICROCONTROLLER FROM DALLAS SEMICONDUCTOR SCHEDULES AND LOGS EVENTS**

News Release, p1

June 6, 1988

Language: English      Record Type: Fulltext

Document Type: Magazine/Journal; Trade

Word Count: 803

... designed for home monitoring of cholesterol. The DS5000T can monitor a patient's cholesterol level, **automatically** storing each test result with its time and date. This data log of cholesterol levels...

...special events such as changes in medication or diet.

The DS5000T also makes trouble-reporting **vending machines** possible, letting the **vending machines** call in conditions such as stock levels or malfunctions. For example, **automated** cafeterias can report expired food freshness dates on a predetermined schedule. **Vending machines** can regularly report **inventory** levels over the phone so they can be **restocked** in time to avoid disrupting service. The Time Microcontroller can also report malfunctions such as...

18/3,K/35      (Item 1 from file: 636)

DIALOG(R) File 636:Gale Group Newsletter DB(TM)  
(c) 2005 The Gale Group. All rts. reserv.

02979601      Supplier Number: 46073657 (USE FORMAT 7 FOR FULLTEXT)  
**MARKET SCANNER: The Cleveland Clinic Foundation**  
Information Management Strategies for Healthcare Executives, v3, n2, pN/A  
Jan 18, 1996  
Language: English      Record Type: Fulltext  
Document Type: Magazine/Journal; Trade  
Word Count: 59

(USE FORMAT 7 FOR FULLTEXT)

TEXT:

...information management services. McKesson will provide the foundation with new information systems capabilities and improved **inventory** management and distribution logistics, including **replenishment** of **automated dispensing units** . Contact McKesson Corp. at (415) 983-8418.  
?

Set	Items	Description
S1	9708	INVENTORY OR INVENTORIES
S2	315531	RESTOCK? OR RE() STOCK? OR REPLENISH? OR REPLAC?
S3	3795776	ONLINE OR ON() LINE OR INTERNET OR INTRANET? OR NETWORK? ? - OR SERVER? ? OR WEB? OR PORTAL? OR WWW OR CYBER? OR ELECTRONI- C? OR AUTOMAT?
S4	42711	(DISPENSING OR VENDING) () (MACHINE? OR UNIT? ?)
S5	528427	CUMULATIVE OR AGGREGAT? OR TOTAL?
S6	2808639	VALUE? ? OR QUANTITY OR QUANTITIES OR AMOUNT OR ITEM? ?
S7	666130	ORDER? ? OR ORDERING
S8	65631	S5 (5N) S6
S9	585	S8 (10N) S7
S10	0	S9 AND S4
S11	13	S9 AND S2
S12	925	S4 AND S2 AND S3
S13	51	S12 AND S7
S14	3	S13 AND S1

? show file

File 347:JAPIO Nov 1976-2005/Jul (Updated 051102)

(c) 2005 JPO & JAPIO

File 350:Derwent WPIX 1963-2005/UD,UM &UP=200582

(c) 2005 Thomson Derwent

*considered 1/22/06 DJ*

14/5/1 (Item 1 from file: 347)  
DIALOG(R)File 347:JAPIO  
(c) 2005 JPO & JAPIO. All rts. reserv.

05583757 \*\*Image available\*\*  
MANAGEMENT DATA GATHERING METHOD FOR AUTOMATIC VENDING MACHINE

PUB. NO.: 09-198557 [JP 9198557 A]  
PUBLISHED: July 31, 1997 (19970731)  
INVENTOR(s): NASHIKI NOBORU  
APPLICANT(s): TAMURA ELECTRIC WORKS LTD [350937] (A Japanese Company or Corporation), JP (Japan)  
APPL. NO.: 08-009187 [JP 969187]  
FILED: January 23, 1996 (19960123)  
INTL CLASS: [6] G07F-009/02  
JAPIO CLASS: 29.4 (PRECISION INSTRUMENTS -- Business Machines); 44.2 (COMMUNICATION -- Transmission Systems)  
JAPIO KEYWORD:R088 (PRECISION MACHINES -- Automatic Vending Machines )  
; R116 ( ELECTRONIC MATERIALS -- Light Emitting Diodes, LED

ABSTRACT

PROBLEM TO BE SOLVED: To reduce the burdens on an operator for performing the replenishing operation of the products of an automatic vending machine by recognizing the inventory conditions of the respective automatic vending machines from a delivery vehicle in advance.

SOLUTION: The delivery vehicle 2 is provided with a radio transmission/reception part 15, a display part 13 and a memory 14 and the automatic vending machine 2 is provided with the radio transmission/reception part and a detection part for detecting the inventory conditions of the respective products or the like. Then, the delivery vehicle successively performs the transceiver calling of a PHS to the respective vending machines corresponding to the respective calling numbers of the respective automatic vending machines registered in the order of a delivery route in the memory 14 beforehand, makes the vending machines detect the inventory conditions of the products or the like, successively receives detected data and displays them at the display part 13. Thus, since the inventory conditions of the respective automatic vending machines or the like are precisely recognized beforehand on the side of the delivery vehicle, the need of performing the operation of stopping the delivery vehicle one by one and checking the inventory conditions for the automatic vending machines without the need of replenishing the products is eliminated and the burdens of the operator are reduced.

14/5/2 (Item 1 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2005 Thomson Derwent. All rts. reserv.

014351356 \*\*Image available\*\*  
WPI Acc No: 2002-172059/200222  
XRPX Acc No: N02-130763

Supply method for items to dispensing units sending restocking information from dispensing units over network to server computer to generate ordering information  
Patent Assignee: OMNICELL.COM (OMNI-N)  
Inventor: GODLEWSKI P; HIGHAM J  
Number of Countries: 096 Number of Patents: 003  
Patent Family:



Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200208939	A1	20020131	WO 2001US22307	A	20010712	200222 B
AU 200180563	A	20020205	AU 200180563	A	20010712	200236
EP 1314105	A1	20030528	EP 2001958958	A	20010712	200336
			WO 2001US22307	A	20010712	

Priority Applications (No Type Date): US 2000624154 A 20000724

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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WO 200208939	A1	E	38	G06F-017/00	
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Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200180563	A			G06F-017/00	Based on patent WO 200208939
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EP 1314105	A1	E		G06F-017/00	Based on patent WO 200208939
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Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR

Abstract (Basic): WO 200208939 A1

NOVELTY - The method involves providing several **dispensing units**, that each hold several of at least one type of item. The units have a processor and a memory for storing a record of **inventory** levels of each item. **Restocking** information is periodically sent from the **dispensing units** over a **network** to a **server** computer. The **restocking** information includes a **restock** quantity for each item.

**Ordering** information is generated for the items to be **restocked** based on the **restocking** information. The **ordering** information is **electronically** sent to one or more supplier computers to **order** items to be **restocked** into the **dispensing units**.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for a hosted procurement application, for a **server** computer and for a system for supplying items to **dispensing units**.

USE - For **automatic** reordering of items for dispensers.

ADVANTAGE - Integrates **ordering** and payment processes to make overall business process more versatile and efficient

DESCRIPTION OF DRAWING(S) - The figure shows a process for polling **dispensing units** using **server** computer and generating **restock** request using administrative computer.

**Dispensing units** (50)

Shelves. (54)

pp; 38 DwgNo 3/13

Title Terms: SUPPLY; METHOD; ITEM; DISPENSE; UNIT; SEND; INFORMATION;

DISPENSE; UNIT; **NETWORK** ; SERVE; COMPUTER; GENERATE; **ORDER** ;

INFORMATION

Derwent Class: T01

International Patent Class (Main): G06F-017/00

International Patent Class (Additional): G06G-001/14

File Segment: EPI

14/5/3 (Item 2 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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014141693 \*\*Image available\*\*

WPI Acc No: 2001-625904/200172

XRPX Acc No: N01-466582

Inventory control system and method allowing third parties to monitor company inventory via the 'net and automatically place orders as needed also provide forum for surplus, used goods sale and resale  
 Patent Assignee: INVINITY SYSTEMS CORP (INVI-N); LUCAS M T (LUCA-I)  
 Inventor: LUCAS M T; LUCAS M

Number of Countries: 095 Number of Patents: 011

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200167356	A1	20010913	WO 2001US7253	A	20010307	200172 B
AU 200149104	A	20010917	AU 200149104	A	20010307	200204
US 20010051905	A1	20011213	US 2000187389	P	20000307	200204
			US 2001799879	A	20010307	
EP 1281142	A1	20030205	EP 2001922287	A	20010307	200310
			WO 2001US7253	A	20010307	
KR 2002092978	A	20021212	KR 2002711724	A	20020907	200328
JP 2003526166	W	20030902	JP 2001565098	A	20010307	200358
			WO 2001US7253	A	20010307	
CN 1427974	A	20030702	CN 2001808966	A	20010307	200361
BR 200109095	A	20040629	BR 20019095	A	20010307	200444
			WO 2001US7253	A	20010307	
US 20040230503	A1	20041118	US 2000187389	P	20000307	200477
			US 2001799879	A	20010307	
			US 2004873183	A	20040623	
US 20050197929	A1	20050908	US 2000187389	P	20000307	200559
			US 2001799879	A	20010307	
			US 200551985	A	20050127	
MX 2002008814	A1	20041201	WO 2001US7253	A	20010307	200561
			MX 20028814	A	20020909	

Priority Applications (No Type Date): US 2000187389 P 20000307; US 2001799879 A 20010307; US 2004873183 A 20040623; US 200551985 A 20050127

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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WO 200167356	A1	E	46	G06F-017/60	
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Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200149104	A			G06F-017/60	Based on patent WO 200167356
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US 20010051905	A1			G06F-017/60	Provisional application US 2000187389
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EP 1281142	A1	E		G06F-017/60	Based on patent WO 200167356
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Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR

KR 2002092978	A			G06F-017/60	
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JP 2003526166	W		58	G06F-017/60	Based on patent WO 200167356
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CN 1427974	A			G06F-017/60	
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BR 200109095	A			G06F-017/60	Based on patent WO 200167356
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US 20040230503	A1			G06F-017/60	Provisional application US 2000187389
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US 20050197929	A1			G06F-017/60	Cont of application US 2001799879 Provisional application US 2000187389
----------------	----	--	--	-------------	--

MX 2002008814	A1			G06F-017/60	Cont of application US 2001799879 Based on patent WO 200167356
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Abstract (Basic): WO 200167356 A1

NOVELTY - The inventory system comprises of third party monitoring (130) of company inventory server (100) via 'net with

**automatic ordering** facility. Also allows third party to act as broker to ensure goods are delivered and paid for while providing forum for surplus and used goods sale and resale. Provides **inventory** tracking system **automatically** contacting suppliers, manufacturers and distributors (120) as supplies become needed. Stock tracking process may be applied to **restocking of vending machines**

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the vendor managed **inventory** system by a third party and also for the **inventory** distribution system included with the management system including the **automated** method implementing the preferred system with the included **order** fulfillment method

USE - Used as an **inventory** control system with **automatic** reordering and stock control

ADVANTAGE - Allows third party access to **inventory** with **automatic ordering** facilities while providing **restocking** as needed for stores or **vending machines** also providing **automatic** distribution service as needed

DESCRIPTION OF DRAWING(S) - The drawing shows the major hardware components of the preferred invention

**Server** (100)

Manufacturers, suppliers (120)

Customer **inventory** system (130)

pp; 46 DwgNo 1/5

Title Terms: **INVENTORY** ; CONTROL; SYSTEM; METHOD; ALLOW; THIRD; PARTY; MONITOR; COMPANY; **INVENTORY** ; NET; **AUTOMATIC** ; PLACE; **ORDER** ; NEED; SURPLUS; GOODS; SALE

Derwent Class: T01

International Patent Class (Main): G06F-017/60

International Patent Class (Additional): G06F-017/30; G06G-001/14

File Segment: EPI

?

Set	Items	Description
S1	712924	INVENTORY OR INVENTORIES
S2	2031111	RESTOCK? OR RE()STOCK? OR REPLENISH? OR REPLAC?
S3	13570973	ONLINE OR ON()LINE OR INTERNET OR INTRANET? OR NETWORK? ? - OR SERVER? ? OR WEB? OR PORTAL? OR WWW OR CYBER? OR ELECTRONI- C? OR AUTOMAT?
S4	25227	(DISPENSING OR VENDING) () (MACHINE? OR UNIT? ?)
S5	6306345	CUMULATIVE OR AGGREGAT? OR TOTAL?
S6	7840987	VALUE? ? OR QUANTITY OR QUANTITIES OR AMOUNT OR ITEM? ?
S7	6137304	ORDER? ? OR ORDERING
S8	382182	S5(5N)S6
S9	6829	S8(10N)S7
S10	1	S9(S)S4
S11	7	S9(2S)S4
S12	255	S9(2S)S2
S13	177	S4(20N)S2(20N)S3
S14	27	S13(S)S7
S15	15	S13(20N)S1
S16	45	S11 OR S14 OR S15
S17	12	S16 NOT PY>2000
S18	8	RD (unique items)
File 20:Dialog Global Reporter 1997-2005/Dec 29		
(c) 2005 Dialog		
File 476:Financial Times Fulltext 1982-2005/Dec 30		
(c) 2005 Financial Times Ltd		
File 610:Business Wire 1999-2005/Dec 29		
(c) 2005 Business Wire.		
File 613:PR Newswire 1999-2005/Dec 29		
(c) 2005 PR Newswire Association Inc		
File 624:McGraw-Hill Publications 1985-2005/Dec 28		
(c) 2005 McGraw-Hill Co. Inc		
File 634:San Jose Mercury Jun 1985-2005/Dec 28		
(c) 2005 San Jose Mercury News		
File 810:Business Wire 1986-1999/Feb 28		
(c) 1999 Business Wire		
File 813:PR Newswire 1987-1999/Apr 30		
(c) 1999 PR Newswire Association Inc		

*considered 1/22/06*  
*[Signature]*

18/3,K/1 (Item 1 from file: 20)  
DIALOG(R)File 20:Dialog Global Reporter  
(c) 2005 Dialog. All rts. reserv.

12576432 (USE FORMAT 7 OR 9 FOR FULLTEXT)  
**CellPoint Subsidiary Unwire Signs \$8 Million Contract; German Company  
Commits to 24,000 Telematics Terminals**  
BUSINESS WIRE  
August 28, 2000  
JOURNAL CODE: WBWE LANGUAGE: English RECORD TYPE: FULLTEXT  
WORD COUNT: 608

(USE FORMAT 7 OR 9 FOR FULLTEXT)

... very confident of the strong position we have today and for the future."

In the vending machine marketplace, Unwire's terminals will automatically notify owners of low stock levels, saving companies time...

... the closest service personnel to be dispatched. It is also possible to add functions to vending machines so that purchasers will be able to buy items from vending machines using their mobile phone.

Unwire AB (www.unwire.com) is a wholly-owned subsidiary of...

18/3,K/2 (Item 2 from file: 20)  
DIALOG(R)File 20:Dialog Global Reporter  
(c) 2005 Dialog. All rts. reserv.

10601057 (USE FORMAT 7 OR 9 FOR FULLTEXT)  
**M2M: Computers leave humans out of the conversation: Automating processes**  
GRACE CASSELMAN  
FINANCIAL POST, p02  
April 17, 2000  
JOURNAL CODE: FFP LANGUAGE: English RECORD TYPE: FULLTEXT  
WORD COUNT: 861

(USE FORMAT 7 OR 9 FOR FULLTEXT)

... integration with global positioning systems) will even report on the location of the fleet. Meanwhile, vending machines low on a certain flavor of soda can automatically dial up the suppliers' computers and order replacement beverages.

According to the Deloitte report, wireless products and the Extensible Markup Language (XML) are...

18/3,K/3 (Item 3 from file: 20)  
DIALOG(R)File 20:Dialog Global Reporter  
(c) 2005 Dialog. All rts. reserv.

02460697  
**Automated case picking system**  
ABIX - AUSTRALASIAN BUSINESS INTELLIGENCE (MANUFACTURERS' MONTHLY) , p61  
February 01, 1998  
JOURNAL CODE: WMMO LANGUAGE: English RECORD TYPE: ABSTRACT  
WORD COUNT: 68

... self-managing, simultaneously replenishing and creating an in-line buffer storage, simplifying the process of order picking. Vertical

accumulation towers store up to one full pallet of a wide range of...

18/3,K/4 (Item 1 from file: 634)  
DIALOG(R)File 634:San Jose Mercury  
(c) 2005 San Jose Mercury News. All rts. reserv.

06720002  
**CHIPS BOWS TO INTEL SUIT TOP STORY: CHIPS AND TECHNOLOGIES ABANDONS ITS  
PLAN FOR A 486-TYPE MICROPROCESSOR.**  
San Jose Mercury News (SJ) - Friday, August 7, 1992  
By: REBECCA SMITH, Mercury News Staff Writer  
Edition: Morning Final Section: Business Page: 1D  
Word Count: 367

... focus primarily on single-chip personal computers and on imbedded controllers, microprocessors used in sophisticated **electronics** devices and automobiles.

Earlier this month, Campbell said in an interview that the firm is working on an imbedded controller that gives soft drink **vending machines** the ability to track sales and phone a warehouse to put in a **restock order**.

18/3,K/5 (Item 1 from file: 810)  
DIALOG(R)File 810:Business Wire  
(c) 1999 Business Wire . All rts. reserv.

0555808 BW1171

**VISTA 2000: VISTA 2000, INC. ANNOUNCES FIRST COMPUTERIZED "SELF-SERVICE"  
KEY MAKER; EXPANDS ITS COLE KEY OPERATIONS**

February 08, 1996

Byline: Business Editors

...is a self-contained unit and can be configured to stand alone or as a **vending machine** with credit card swipe or dollar bill interface. It will be able to communicate with...

...Data Center at its American Consumer Products, Inc. (ACPI) offices in Cleveland, Ohio to provide **inventory** status and **automatically order re - stocks** of sold out keys. It features robotic, servo-driven, long-life cutter tooling and a...

18/3,K/6 (Item 2 from file: 810)  
DIALOG(R)File 810:Business Wire  
(c) 1999 Business Wire . All rts. reserv.

0546309 BW1044

**MCKESSON: The Cleveland Clinic Foundation awards multi-year contract to  
McKesson**

January 08, 1996

Byline: Business Editors

...pharmaceuticals, we'll be working together to help the Cleveland Clinic develop new levels of **inventory** management and distribution logistics, including **replenishment** of **automated dispensing units**. We

also will provide the clinic with new information system capabilities."

"We are excited to...

18/3,K/7 (Item 1 from file: 813)

DIALOG(R) File 813:PR Newswire

(c) 1999 PR Newswire Association Inc. All rts. reserv.

1106841

CLTU035

**Pyxis Corporation Introduces MedStation-Rx System 2000, Minidrawers, and CII Safe-NV**

DATE: June 3, 1997

16:44 EDT

WORD COUNT: 698

... transactions. In addition, it is the only controlled substance tracking system capable of interfacing with **Automated Dispensing Machines** located throughout patient care areas to provide real-time information, including medication **restocking** confirmation, to the pharmacy.

Pyxis is also previewing several important future product offerings at the ASHP's Annual Meeting. These products, Pyxis Auto- **Replenishment** (TM) (PAR) and PyxisConnect(TM), are designed to increase the overall value of its MedStation-Rx systems. PAR is a value added enhancement to the MedStation product line. PAR **automates** the pick, check, and delivery functions for acute care pharmacies by utilizing innovative, hand held...

... benefits of PAR are maximized when used in conjunction with CardinalCHOICE(R) inventory management and **order** -entry systems and Cardinal's proprietary PyxisPak(TM) low unit of measure packaging.

PyxisConnect provides...

18/3,K/8 (Item 2 from file: 813)

DIALOG(R) File 813:PR Newswire

(c) 1999 PR Newswire Association Inc. All rts. reserv.

0778672

LA013

**BERGEN BRUNSWIG NAMED AUTHORIZED DISTRIBUTION AGENT FOR VHA**

13:36 EST

WORD COUNT: 408

...added programs Bergen Brunswig offers its hospital and managed healthcare customers include: participation in an **electronic** data interchange system (OnCall EDI) that facilitates routine procurement and **electronic** invoicing; AccuNet (TM) **inventory** control program; **automatic replenishment** interface between AccuNet and **automated** prescription **dispensing machines**; PrimeLine (R), an **on - line**, real time, **electronic** link to Bergen Brunswig; just-in-time delivery; **automated** contract compliance; and **inventory** analysis and standing **order** capability.

Bergen Brunswig Corp., with annual revenues in excess of  
\$7.5 billion, is the...  
?